

EXHIBIT 26

EXHIBIT 26 - US 9,708,659 Patent - Single Cell 3' Workflow Accused Products

Claim Number	Claim Language	Single Cell 3' Workflow Accused Products
1	A system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample comprising cells, the system comprising:	The Single Cell 3' Workflow Accused Products are “a system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample comprising cells” as recited in claim 1, because “[t]he 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome . . . by partitioning thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs).”¹ As illustrated below,² “the cells are delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.” The Single Cell 3' Workflow Accused Products are for “counting n, wherein n is a number of nucleic acid target molecules” because the “Cell Ranger™” analysis software performs “demultiplexing, alignment, and gene counting”³ and because the information generated with the Cell Ranger software is used for “cell clustering, cell type classification, and differential gene expression at a scale of hundreds to millions of cells.”⁴ “Cell Ranger is a set of analysis

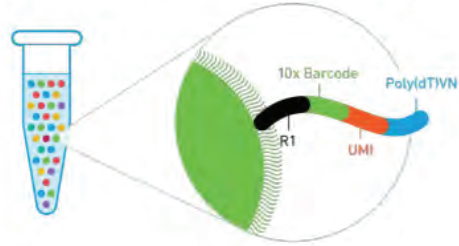
¹ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

² *Id.*

³ *Id.*

⁴ *Id.*

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		pipelines [that perform gene expression analysis by] alignment, filtering, barcode counting, and UMI counting,” ⁵ which is “counting n, wherein n is a number of nucleic acid target molecules system produces.”
1(a)	a diverse set of labels, wherein the set comprises m different labels, wherein the ratio of m to n is greater than 5;	The Single Cell 3' Workflow Accused Products comprise “a diverse set of labels, wherein the set comprises m different labels” because “Gel Beads are... functionalized with millions of copies of a 10x Barcoded primer.”⁶ As illustrated below⁷, the system comprises “~ 750000 barcodes to separately index each cell’s transcriptome.”⁸ As shown below⁹, the “diverse set of labels, wherein the set comprises m different labels” in the Single Cell 3' Workflow Accused Products is the “10nt Unique Molecular Identifier.” Each Gel Bead contains millions of oligo primers that are comprised of the following sequences (Figure 1):  Fig. 1. Schematic of a SC3' v2 Gel Bead oligo primer. In the Single Cell 3' Workflow Accused Products, “the ratio of m to n is greater than 5” as recited in step (a) because “[t]he 10x™ GemCode™ Technology... samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome”¹⁰ and because the “number of

⁵ <https://support.10xgenomics.com/single-cell-gene-expression/software/pipelines/latest/what-is-cell-ranger>

⁶ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

⁷ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

⁸ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

⁹ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

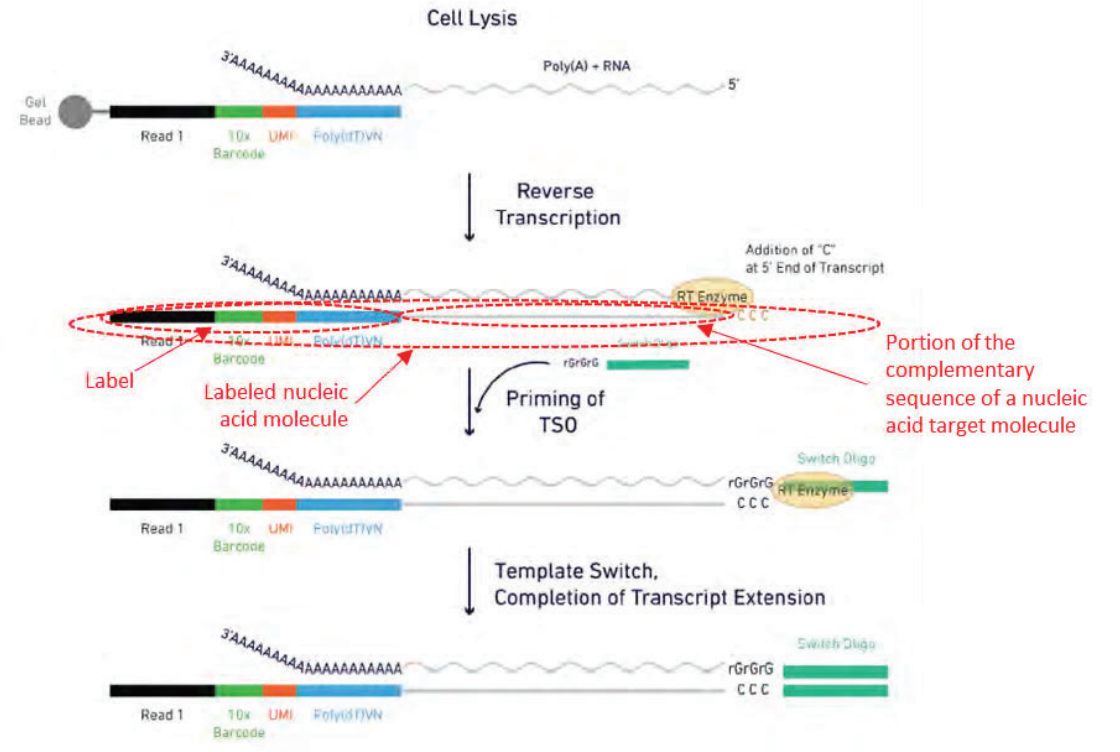
¹⁰ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

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		nucleic acid target molecules that are present in a single cell” is less than 150000. For example, single cell analysis shows “~4,500 genes and 27,000 transcripts [...] detected” human and mouse cells. ¹¹
1(b)	a plurality of reaction vessels for attaching a label from the diverse set of labels to each occurrence of the nucleic acid target molecules from each single cell from said sample comprising cells to generate a set of labeled nucleic acid target molecules, wherein the individual labeled nucleic acid target molecules comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels; and	The Single Cell 3' Workflow Accused Products comprise “a plurality of reaction vessels for attaching a label from the diverse set of labels to each occurrence of the nucleic acid target molecules from each single cell from said sample comprising cells” as recited in step (b) of claim 1 because “[t]he 10x™ GemCode™ Technology... partition[s] thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs),”¹² and because “[o]nce partitioned, the Gel Bead dissolves and its oligo primers are released into the aqueous environment of the GEM”¹³ and because “[t]he contents of the GEM [...] are incubated in a reverse transcription (RT) reaction to generate full-length, barcoded cDNA from poly-adenylated mRNA.”¹⁴ The Single Cell 3' Workflow Accused Products comprise “a plurality of reaction vessels for attaching a label from the diverse set of labels to each occurrence of the nucleic acid target molecules from each single cell from said sample comprising cells to generate a set of labeled nucleic acid target molecules” as recited in step (b) of claim 1 because a “reverse transcription reaction is primed by the barcoded Gel Bead oligo.”¹⁵ As illustrated below¹⁶, the “labels” are attached to “nucleic acid target molecules from each single cell” and thereby generate the “set of labeled nucleic acid target molecules” by an extension reaction, which “comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels” as recited in step (b) of claim 1.

¹¹ “Chromium™ Single Cell Solutions 10x Single Cell App Note” (10x_Single_Cell_App_Note.pdf)¹² Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3'ReagentKitv2UserGuide_RevD.pdf)¹³ TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)¹⁴ *Id.*¹⁵ *Id.*¹⁶ *Id.* at Figure 3 (cropped, markings added)

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Claim Number	Claim Language	Single Cell 3' Workflow Accused Products
		 The diagram illustrates the Single Cell 3' Workflow process. It begins with Cell Lysis, where a Gel Bead (containing Read 1, 10x Barcode, UMI, and Poly(dT)VN) is mixed with Poly(A) + RNA. This is followed by Reverse Transcription, where an RT Enzyme adds C at the 5' end of the transcript. A Label is added to the Read 1 sequence. Then, Priming of TSO occurs using an rGrGrG primer. Finally, Template Switch, Completion of Transcript Extension is shown, resulting in a Switch Oligo and rGrGrG sequence. A red dashed oval highlights the Labeled nucleic acid molecule and the Portion of the complementary sequence of a nucleic acid target molecule.
1(c)	processing software for counting n from a number of labeled nucleic acid target molecules detected.	The Single Cell 3' Workflow Accused Products comprise “processing software for counting n from a number of labeled nucleic acid target molecules detected” as recited in step (c) of claim 1 because “the 10x Barcodes are used to associate individual reads back to the individual partitions ¹⁷ using “Cell Ranger™” analysis software to perform “demultiplexing, alignment,

¹⁷ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

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		and gene counting.” ¹⁸ The information generated with the Cell Ranger software is used for “cell clustering, cell type classification, and differential gene expression at a scale of hundreds to millions of cells.” ¹⁹
4	The system of claim 1, wherein the nucleic acid target molecules present in the sample are mRNA molecules, and wherein the labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to a label from the diverse set of labels.	<i>See</i> claim 1(b). In the Single Cell 3' Workflow Accused Products, the nucleic acid target molecules present in the sample are mRNA molecules, and wherein the labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to a label from the diverse set of labels because “the cell captured in the GEM is [...] lysed” (thereby releasing the “nucleic acid target molecules” in the cell) and “[t]he contents of the GEM (oligos, lysed cell components and Master Mix) are incubated in an RT reaction.” ²⁰ “The contents of the GEM (oligos, lysed cell components and Master Mix) are incubated in an RT reaction to generate full-length, barcoded cDNA from the poly A-tailed mRNA transcripts.” ²¹ As shown below ²² , the nucleic acid target molecules present in the sample are mRNA molecules, and labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to the label.

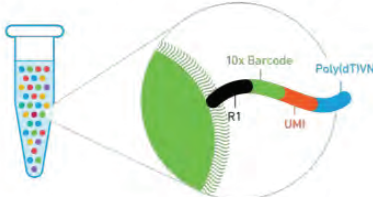
¹⁸ *Id.*¹⁹ *Id.*²⁰ *Id.*²¹ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)²² *Id.* at Figure 3 (cropped, markings added)

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		The diagram illustrates the Single Cell 3' Workflow process. It begins with Cell Lysis, where a Gel Bead (containing Read 1, 10x Barcode, UMI, and Poly(dITVN)) is mixed with Poly(A) + RNA. This is followed by Reverse Transcription, where an RT Enzyme adds C at the 5' end of the transcript. A Label (red dashed oval) highlights the Read 1, 10x Barcode, and UMI regions. The process then shows Priming of TSO (Target Sequencing Oligo) with a Switch Oligo (rGrGrG CCC) and RT Enzyme. Finally, Template Switch, Completion of Transcript Extension is shown, resulting in a Read 1 with 10x Barcode, UMI, and Poly(dITVN).
6	The system of claim 1, wherein the diverse set of labels comprises a plurality of oligonucleotides.	See claim 1(a). In the Single Cell 3' Workflow Accused Products, the diverse set of labels comprises a plurality of oligonucleotides because the system comprises “~ 750000 barcodes to separately index each cell’s transcriptome.” ²³

²³ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

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7	The system of claim 6, wherein the plurality of oligonucleotides are attached to one or more beads.	<i>See</i> claim 1(a), claim 6. In the Single Cell 3' Workflow Accused Products, the plurality of oligonucleotides are attached to one or more beads because “Gel Beads are... functionalized with millions of copies of a 10x Barcoded primer.” ²⁴
8	The system of claim 7, wherein each oligonucleotide of the plurality of oligonucleotides comprises a common sequence, a variable target label sequence, and a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule.	<i>See</i> claim 7. The Single Cell 3' Workflow Accused Products contain Gel Beads that comprise “millions of oligo primers that comprise different Unique Molecular Identifiers”²⁵ that make up “a pool of ~ 750000 barcodes to separately index each cell’s transcriptome”²⁶ As shown below²⁷, “each oligonucleotide label of the plurality of oligonucleotide labels” in the Single Cell 3' Workflow Accused Products comprise “a common sequence” (“16 nt 10x Barcode”),²⁸ “a variable target label sequence” (“10 nt Unique Molecular Identifier”),²⁹ and “a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule” (“30nt Poly(dT) primer sequence”). Each Gel Bead contains millions of oligo primers that are comprised of the following sequences (Figure 1):  Fig. 1. Schematic of a SC3' v2 Gel Bead oligo primer.

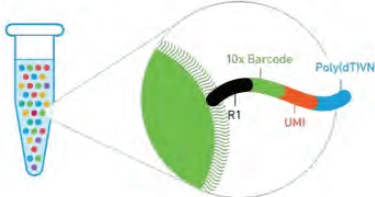
²⁴ *Id.*²⁵ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)²⁶ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3'ReagentKitv2UserGuide_RevD.pdf)²⁷ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)²⁸ All of the oligonucleotides of a gel bead “share a common 10x Barcode.” *See* “Chromium™ Single Cell 3' Reagent Kits v2 User Guide”

(CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

²⁹ “The 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes.” *See* “Chromium™ Single Cell 3' Reagent Kits v2 User Guide”

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9	The system of claim 8, wherein the oligonucleotides further comprise one or more primer sequences.	<i>See claim 8.</i> The oligonucleotides of the Single Cell 3' Workflow Accused Products further comprise “one or more primer sequences” (“an Illumina® R1 sequence (read 1 sequencing primer)”).³⁰ Each Gel Bead contains millions of oligo primers that are comprised of the following sequences (Figure 1):  i. Partial Illumina Read 1 sequence (22 nucleotides (nt)) ii. 16 nt 10x™ Barcode iii. 10 nt Unique Molecular Identifier (UMI) iv. 30 nt Poly(dT) primer sequence Fig. 1. Schematic of a SC3' v2 Gel Bead oligo primer.

³⁰See “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

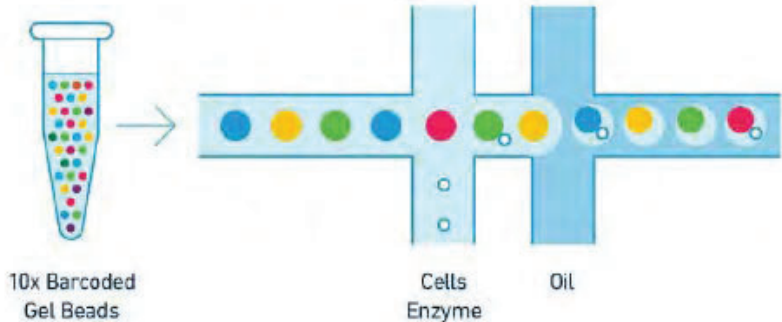
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		Bulk The diagram illustrates the Single Cell 3' Workflow process. It begins with 'Full Length cDNA' and a 'PCR Primer'. This is followed by 'cDNA Amplification (PCR #1)'. The next step is 'Enzymatic Fragmentation', which results in the '3' End of cDNA'. This is followed by 'End Repair, A-Tail, Ligation'. After 'Clean up', the 'Sample Index PCR (PCR #2)' is performed. The final product is a sequencing-ready molecule with the following components: P5, Read 1, 10x Barcode, UMI, Poly(dT)VN, Read 2, Sample Index, and PT.
10	The system of claim 9, wherein a reaction vessel of the plurality of reaction vessels contains a single bead.	See claim 1(b). In the Single Cell 3' Workflow Accused Products, a reaction vessel of the plurality of reaction vessels contains a single bead because the Single Cell 3' Workflow Accused Products partition “thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs).”³¹ As illustrated below,³² “10x Genomics technology is based on the partitioning of samples and reagents into droplets, each called a Gel Bead in Emulsion (GEM). Once partitioned, the Gel Bead dissolves and its oligo primers are released into the aqueous

³¹ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

³² *Id.*

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		environment of the GEM. The cell captured in the GEM is also lysed.”³³ As shown below, each GEM contains a single bead. 
11	The system of claim 10, wherein the reaction vessel of the plurality of reaction vessels that contains a single bead also contains a single cell from said sample comprising cells.	See claim 1(b), claim 10. In the Single Cell 3' Workflow Accused Products, the reaction vessel of the plurality of reaction vessels that contains a single bead also contains a single cell from said sample comprising cells because “the cells are delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.” ³⁴
13	A system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample	The Single Cell 3' Workflow Accused Products are “a system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample comprising cells” because “[t]he 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome . . . by partitioning thousands of cells

³³ See “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)³⁴ *Id.*

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	comprising cells, the system comprising:	into nanoliter-scale Gel Bead-In-EMulsions (GEMs).”³⁵ As illustrated below,³⁶ “the cells are delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.” The Single Cell 3' Workflow Accused Products are for “counting n, wherein n is a number of nucleic acid target molecules” because the “Cell Ranger™” analysis software performs “demultiplexing, alignment, and gene counting”³⁷ and because the information generated with the Cell Ranger software is used for “cell clustering, cell type classification, and differential gene expression at a scale of hundreds to millions of cells.”³⁸ “Cell Ranger is a set of analysis pipelines [that perform gene expression analysis by] alignment, filtering, barcode counting, and UMI counting,”³⁹ which is “counting n, wherein n is a number of nucleic acid target molecules system produces.”

³⁵ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

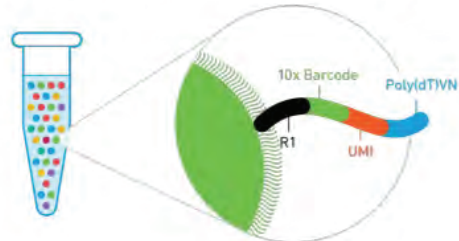
³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ <https://support.10xgenomics.com/single-cell-gene-expression/software/pipelines/latest/what-is-cell-ranger>

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13(a)	a diverse set of labels comprising a plurality of oligonucleotides attached to each bead of a plurality of beads, wherein the set of labels comprises m different labels, wherein $m > n$,	The Single Cell 3' Workflow Accused Products comprise “comprising a plurality of oligonucleotides attached to each bead of a plurality of beads, wherein the set of labels comprises m different labels,” because “Gel Beads are... functionalized with millions of copies of a 10x Barcoded primer.”⁴⁰ As illustrated below⁴¹, the system comprises “~ 750000 barcodes to separately index each cell’s transcriptome.”⁴² As shown below⁴³, the “diverse set of labels, wherein the set comprises m different labels” in the Single Cell 3' Workflow Accused Products is the “10nt Unique Molecular Identifier.” Each Gel Bead contains millions of oligo primers that are comprised of the following sequences (Figure 1):  i. Partial Illumina Read 1 sequence (22 nucleotides (nt)) ii. 16 nt 10x™ Barcode iii. 10 nt Unique Molecular Identifier (UMI) iv. 30 nt Poly(dT) primer sequence Fig. 1. Schematic of a SC3' v2 Gel Bead oligo primer. In the Single Cell 3' Workflow Accused Products, “$m > n$” as recited in step (a) because “[t]he 10x™ GemCode™ Technology... samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome”⁴⁴ and because the “number of nucleic acid target molecules that are present in a single cell” is less than 150000. For example, single cell analysis shows “~4,500 genes and 27,000 transcripts [...] detected” human and mouse cells.⁴⁵

⁴⁰ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

⁴¹ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

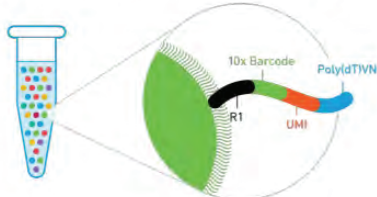
⁴² “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

⁴³ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

⁴⁴ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

⁴⁵ “Chromium™ Single Cell Solutions 10x Single Cell App Note” (10x_Single_Cell_App_Note.pdf)

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	and wherein each oligonucleotide of the plurality of oligonucleotides comprises a common sequence, a variable target label sequence, and a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule;	In the Single Cell 3' Workflow Accused Products “each oligonucleotide of the plurality of oligonucleotides comprises a common sequence, a variable target label sequence, and a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule” because the Single Cell 3' Workflow Accused Products contain Gel Beads that comprise “millions of oligo primers that comprise different Unique Molecular Identifiers”⁴⁶ that make up “a pool of ~ 750000 barcodes to separately index each cell’s transcriptome”⁴⁷ As shown below⁴⁸, “each oligonucleotide label of the plurality of oligonucleotide labels” in the Single Cell 3' Workflow Accused Products comprise “a common sequence” (“16 nt 10x Barcode”),⁴⁹ “a variable target label sequence” (“10 nt Unique Molecular Identifier”),⁵⁰ and “a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule” (“30nt Poly(dT) primer sequence”). Each Gel Bead contains millions of oligo primers that are comprised of the following sequences (Figure 1):  i. Partial Illumina Read 1 sequence (22 nucleotides (nt)) ii. 16 nt 10x™ Barcode iii. 10 nt Unique Molecular Identifier (UMI) iv. 30 nt Poly(dT) primer sequence Fig. 1. Schematic of a SC3' v2 Gel Bead oligo primer.
13(b)	a plurality of reaction vessels comprising a single cell from said	The Single Cell 3' Workflow Accused Products comprise “a plurality of reaction vessels comprising a single cell from said sample comprising cells and a single bead from said

⁴⁶ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

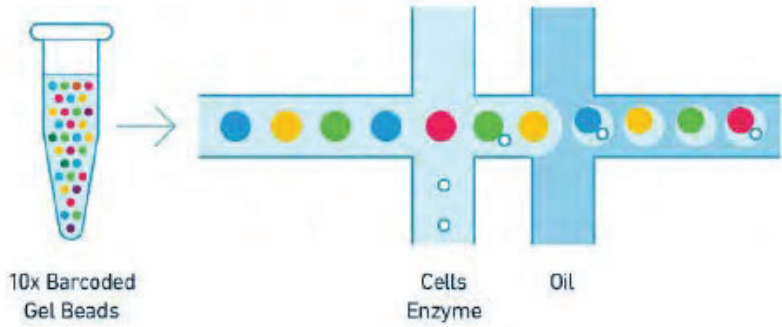
⁴⁷ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3'ReagentKitv2UserGuide_RevD.pdf)

⁴⁸ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

⁴⁹ All of the oligonucleotides of a gel bead “share a common 10x Barcode.” See “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

⁵⁰ “The 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes.” See “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

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	sample comprising cells and a single bead from said plurality of beads,	plurality of beads” because the Single Cell 3' Workflow Accused Products partition “thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs).”⁵¹ As illustrated below,⁵² “10x Genomics technology is based on the partitioning of samples and reagents into droplets, each called a Gel Bead in Emulsion (GEM). Once partitioned, the Gel Bead dissolves and its oligo primers are released into the aqueous environment of the GEM. The cell captured in the GEM is also lysed.”⁵³ As shown below, each GEM contains a single bead. In the Single Cell 3' Workflow Accused Products, the reaction vessel of the plurality of reaction vessels that contains a single bead also contains a single cell from said sample comprising cells because “the cells are delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.”⁵⁴ 
	wherein each reaction vessel is used for attaching a label from the diverse set of labels attached to the bead contained therein to	In the Single Cell 3' Workflow Accused Products “each reaction vessel is used for attaching a label from the diverse set of labels attached to the bead contained therein to each occurrence of the nucleic acid target molecules from the single cell contained therein to generate a set of labeled nucleic acid target molecules” because a “reverse transcription reaction is primed by

⁵¹ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

⁵² *Id.*

⁵³ See “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell 3' v2 Libraries” (CG000108_AssayConfiguration_SC3v2.pdf)

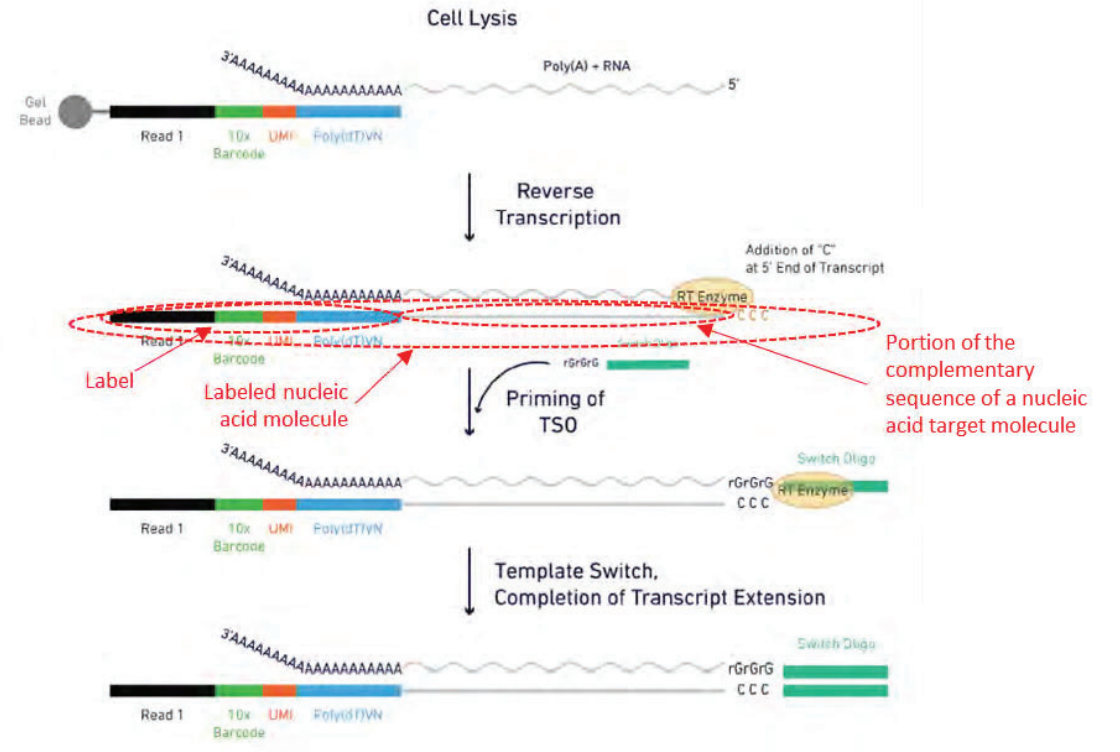
⁵⁴ *Id.*

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	each occurrence of the nucleic acid target molecules from the single cell contained therein to generate a set of labeled nucleic acid target molecules, wherein the individual labeled nucleic acid target molecules comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels; and	the barcoded Gel Bead oligo.” ⁵⁵ As illustrated below ⁵⁶ , the “labels” are attached to “nucleic acid target molecules from the single cell” and thereby generate the “set of labeled nucleic acid target molecules” by an extension reaction. The labeled nucleic acid target molecules generated by the extension reaction, “comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels” as shown below.

⁵⁵ *Id.*⁵⁶ *Id.* at Figure 3 (cropped, markings added)

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13(c)	processing software for counting n from a number of labeled	The Single Cell 3' Workflow Accused Products comprise “processing software for counting n from a number of labeled nucleic acid target molecules detected” because “the 10x Barcodes are used to associate individual reads back to the individual partitions ⁵⁷ using “Cell

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16	The system of claim 13, wherein the nucleic acid target molecules present in the sample comprising cells are mRNA molecules, and wherein the labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to a label from the diverse set of labels.	<i>See claim 4.</i>
18	The system of claim 13, wherein the oligonucleotides further comprise one or more primer sequences.	<i>See claim 9.</i>
19	The system of claim 13, wherein the common sequence for the plurality of oligonucleotides	In the Single Cell 3' Workflow Accused Products, “the common sequence for the plurality of oligonucleotides attached to a given bead is different from that for the pluralities of oligonucleotides attached to other beads in the plurality of beads” because the “10X barcode” is a “[d]efined DNA sequences that are added to each cDNA generated in a GEM so they can be distinguished and sorted during data analysis.” ⁶⁰ “Upon isothermal incubation, the cDNA

⁵⁸ *Id.*⁵⁹ *Id.*⁶⁰ “Chromium™ Single Cell 3' Reagent Kits v2 User Guide” (CG00052_SingleCell3_ReagentKitv2UserGuide_RevD.pdf)

EXHIBIT 26 - US 9,708,659 Patent - Single Cell 3’ Workflow Accused Products

Claim Number	Claim Language	Single Cell 3’ Workflow Accused Products
	attached to a given bead is different from that for the pluralities of oligonucleotides attached to other beads in the plurality of beads.	produced in each GEM contains a 10x Barcode that identifies them as having originated from the same sample partition.” ⁶¹

⁶¹ *Id.*

EXHIBIT 27

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
1	A system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample comprising cells, the system comprising:	The Single Cell 5' Workflow Accused Products are “a system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample comprising cells” as recited in claim 1, because “[t]he 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome . . . by partitioning thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs).”¹ As illustrated below,² “the cells are delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.” The Single Cell 5' Workflow Accused Products are for “counting n, wherein n is a number of nucleic acid target molecules” because the “Cell Ranger™” analysis software performs “demultiplexing, alignment, and gene counting”³ and because the information generated with the Cell Ranger software is used for “cell clustering, cell type classification, and differential gene expression at a scale of hundreds to millions of cells.”⁴ “Cell Ranger is a set of analysis

¹ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

² *Id.*

³ *Id.*

⁴ *Id.*

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		pipelines [that perform gene expression analysis by] alignment, filtering, barcode counting, and UMI counting,” ⁵ which is “counting n, wherein n is a number of nucleic acid target molecules system produces.”
1(a)	a diverse set of labels, wherein the set comprises m different labels, wherein the ratio of m to n is greater than 5;	The Single Cell 5' Workflow Accused Products comprise “a diverse set of labels, wherein the set comprises m different labels” because “Gel Beads are... functionalized with millions of copies of a 10x Barcoded primer.”⁶ As illustrated below⁷, the system comprises “~ 750000 barcodes to separately index each cell’s transcriptome.”⁸ As shown below⁹, the “diverse set of labels, wherein the set comprises m different labels” in the Single Cell 5' Workflow Accused Products is the “10nt Unique Molecular Identifier.”  Figure 1. Schematic of a Single Cell 5' Gel Bead oligo primer. In the Single Cell 5' Workflow Accused Products, “the ratio of m to n is greater than 5” as recited in step (a) because “[t]he 10x™ GemCode™ Technology... samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome”¹⁰ and because the “number of nucleic acid target molecules that are present in a single cell” is less than 150000. For

⁵ <https://support.10xgenomics.com/single-cell-gene-expression/software/pipelines/latest/what-is-cell-ranger>

⁶ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁷ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

⁸ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁹ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

¹⁰ “Chromium™ Single Cell V(D)J Reagent Kits User Guide”: CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		example, single cell analysis shows “~4,500 genes and 27,000 transcripts [...] detected” human and mouse cells. ¹¹
1(b)	a plurality of reaction vessels for attaching a label from the diverse set of labels to each occurrence of the nucleic acid target molecules from each single cell from said sample comprising cells to generate a set of labeled nucleic acid target molecules, wherein the individual labeled nucleic acid target molecules comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels; and	The Single Cell 5' Workflow Accused Products comprise “a plurality of reaction vessels for attaching a label from the diverse set of labels to each occurrence of the nucleic acid target molecules from each single cell from said sample comprising cells” as recited in step (b) of claim 1 because “[t]he 10x™ GemCode™ Technology... partition[s] thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs),”¹² and because “[o]nce partitioned, the Gel Bead dissolves and its oligo primers are released into the aqueous environment of the GEM”¹³ and because “[t]he contents of the GEM [...] are incubated in a reverse transcription (RT) reaction to generate full-length, barcoded cDNA from poly-adenylated mRNA.”¹⁴ The Single Cell 5' Workflow Accused Products comprise “a plurality of reaction vessels for attaching a label from the diverse set of labels to each occurrence of the nucleic acid target molecules from each single cell from said sample comprising cells to generate a set of labeled nucleic acid target molecules” as recited in step (a) of claim 1 because “[t]he contents of the GEM [...] are incubated in a reverse transcription (RT) reaction to generate full-length, barcoded cDNA from poly-adenylated mRNA.”¹⁵ As illustrated below¹⁶, the “labels” hybridize to a reverse transcription product of the “nucleic acid target molecules.” The “set of labeled nucleic acid target molecules” are generated upon a “template switch” step, each of which “comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels” as recited in step (b) of claim 1.

¹¹ “Chromium™ Single Cell Solutions 10x Single Cell App Note” (10x_Single_Cell_App_Note.pdf)

¹² “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

¹³ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.* at Figure 3 (cropped, markings added)

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

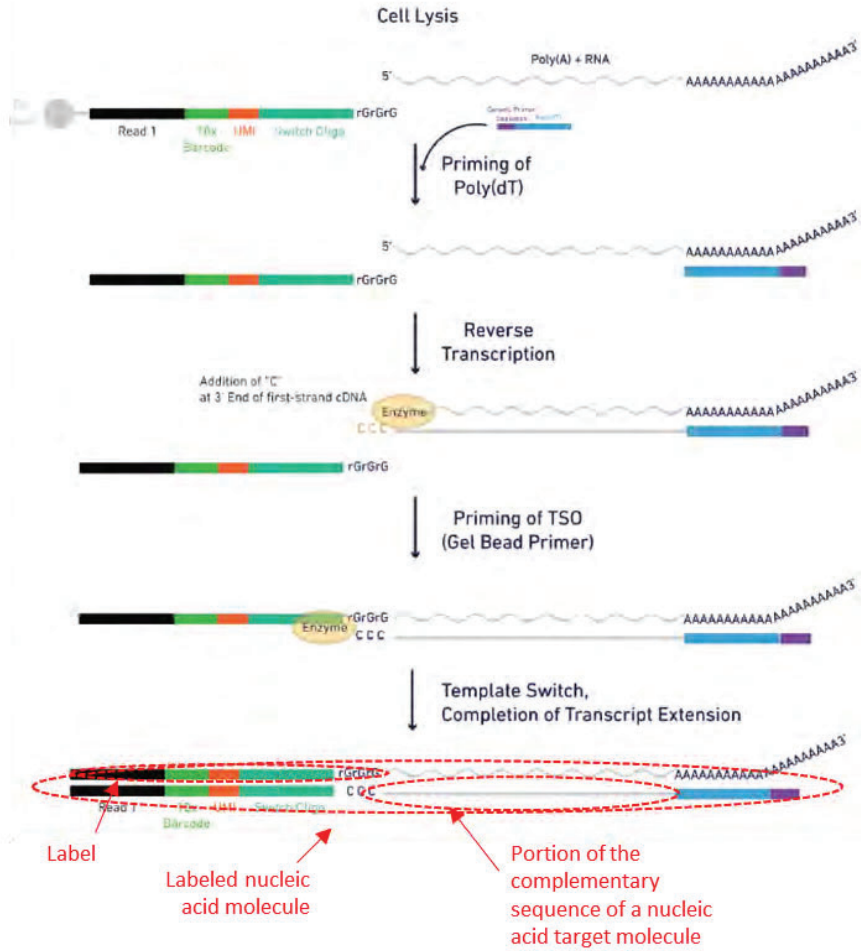
Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		 The diagram illustrates the Single Cell 5' Workflow process, showing the steps from cell lysis to the final template switch and transcript extension. The process involves the following steps: Cell Lysis: The process begins with a cell containing a target RNA molecule (Poly(A) + RNA) and a bead-bound oligo (Read 1, 10x, 10M, Switch Oligo, rGrGrG). Priming of Poly(dT): A generic primer (5'-GGGAG-3') is used to prime the poly(A) tail of the RNA. Reverse Transcription: An enzyme (labeled 'Enzyme') is added to the reaction, and the first-strand cDNA is synthesized. Priming of TSO (Gel Bead Primer): A second primer (5'-GGGAG-3') is used to prime the TSO (Gel Bead Primer) on the bead. Template Switch, Completion of Transcript Extension: The process concludes with the template switch and completion of transcript extension, resulting in a labeled nucleic acid molecule (Read 1, 10x, 10M, Switch Oligo, rGrGrG) and a portion of the complementary sequence of a nucleic acid target molecule (5'-GGGAG-3'). Labels in the diagram include: Read 1, 10x, 10M, Switch Oligo, rGrGrG, Poly(A) + RNA, Generic Primer, Enzyme, C C C, Label, Labeled nucleic acid molecule, and Portion of the complementary sequence of a nucleic acid target molecule.

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
1(c)	processing software for counting n from a number of labeled nucleic acid target molecules detected.	The Single Cell 5' Workflow Accused Products comprise “processing software for counting n from a number of labeled nucleic acid target molecules detected” as recited in step (c) of claim 1 because “the 10x Barcodes are used to associate individual reads back to the individual partitions ¹⁷ using “Cell Ranger™” analysis software to perform “demultiplexing, alignment, and gene counting.” ¹⁸ The information generated with the Cell Ranger software is used for “cell clustering, cell type classification, and differential gene expression at a scale of hundreds to millions of cells.” ¹⁹
4	The system of claim 1, wherein the nucleic acid target molecules present in the sample are mRNA molecules, and wherein the labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to a label from the diverse set of labels.	<i>See</i> claim 1(b). In the Single Cell 5' Workflow Accused Products, the nucleic acid target molecules present in the sample are mRNA molecules, and wherein the labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to a label from the diverse set of labels because “the cell captured in the GEM is [...] lysed” (thereby releasing the “nucleic acid target molecules” in the cell) and “[t]he contents of the GEM (oligos, lysed cell components and Master Mix) are incubated in an RT reaction.” ²⁰ “The contents of the GEM (oligos, lysed cell components and Master Mix that contains the Poly-dT RT primer) are incubated in a reverse transcription (RT) reaction to generate full-length, barcoded cDNA from the poly-adenylated mRNA.” ²¹ As shown below, ²² the nucleic acid target molecules present in the sample are mRNA molecules, and labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to the label.

¹⁷ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

²² *Id.* at Figure 3 (cropped, markings added)

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

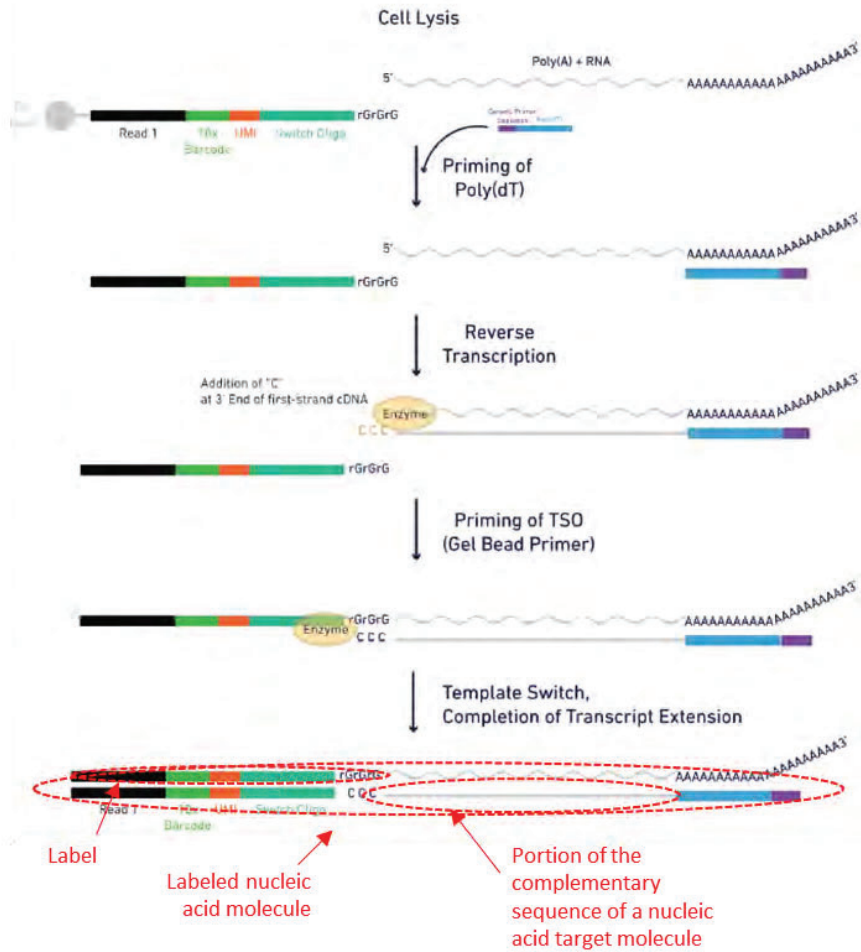
Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		 The diagram illustrates the Single Cell 5' Workflow process, showing the steps from cell lysis to transcript extension. The process involves a gel bead with a primer (Read 1, Tfx, HMI, Switch Cligs, rGrGrG) and a poly(A) + RNA target molecule. The steps are: Cell Lysis: The target molecule is released from the cell. Priming of Poly(dT): The poly(A) tail of the RNA is primed with a poly(dT) sequence. Reverse Transcription: The poly(dT) sequence is extended by an enzyme, creating a first-strand cDNA. Priming of TSO (Gel Bead Primer): The first-strand cDNA is primed with a TSO (Gel Bead Primer) sequence. Template Switch, Completion of Transcript Extension: The TSO sequence is extended by an enzyme, creating a second-strand cDNA. The final product is a double-stranded cDNA molecule, which is labeled with a red dashed oval. The labels indicate the Label, Labeled nucleic acid molecule, and Portion of the complementary sequence of a nucleic acid target molecule.

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
6	The system of claim 1, wherein the diverse set of labels comprises a plurality of oligonucleotides.	<i>See</i> claim 1(a). In the Single Cell 5' Workflow Accused Products, the diverse set of labels comprises a plurality of oligonucleotides because the system comprises “~ 750000 barcodes to separately index each cell’s transcriptome.” ²³
7	The system of claim 6, wherein the plurality of oligonucleotides are attached to one or more beads.	<i>See</i> claim 1(a), claim 6. In the Single Cell 5' Workflow Accused Products, the plurality of oligonucleotides are attached to one or more beads. “Gel Beads are... functionalized with millions of copies of a 10x Barcoded primer.” ²⁴
8	The system of claim 7, wherein each oligonucleotide of the plurality of oligonucleotides comprises a common sequence, a variable target label sequence, and a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule.	<i>See</i> claim 7. The Single Cell 5' Workflow Accused Products contain Gel Beads that comprise “millions of oligo primers” ²⁵ that comprise different “Unique Molecular Identifiers” that make up “a pool of ~ 750000 barcodes to separately index each cell’s transcriptome.” ²⁶ As shown below ²⁷ , “each oligonucleotide label of the plurality of oligonucleotide labels” in the Single Cell 5' Workflow Accused Products comprise “a common sequence” (“16 nt 10x Barcode”), ²⁸ “a variable target label sequence” (“10 nt Unique Molecular Identifier”), ²⁹ and “a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule” (“13nt Switch Oligo”).

²³ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

²⁴

²⁵ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

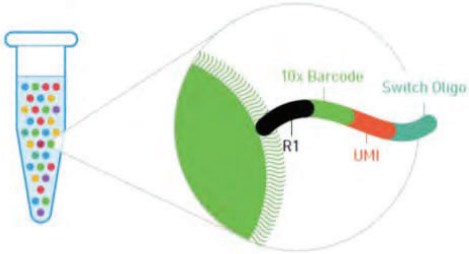
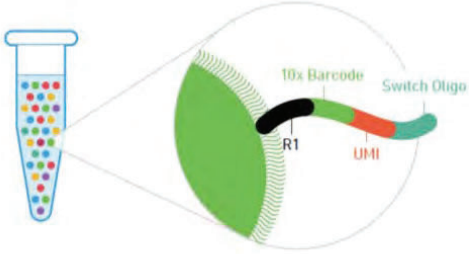
²⁶ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

²⁷ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

²⁸ All of the oligonucleotides of a gel bead “share a common 10x Barcode.” *See* “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

²⁹ “The 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes.” *See* “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		 Figure 1. Schematic of a Single Cell 5' Gel Bead oligo primer. i. Partial Illumina Read 1 Sequence (22 nucleotides (nt)) ii. 16 nt 10x™ Barcode iii. 10 nt Unique Molecular Identifier (UMI) iv. 13 nt Switch Oligo
9	The system of claim 8, wherein the oligonucleotides further comprise one or more primer sequences.	<i>See claim 8.</i> The oligonucleotides of the Single Cell 5' Workflow Accused Products further comprise “one or more primer sequences” (“an Illumina® R1 sequence (read 1 sequencing primer)”).³⁰  Figure 1. Schematic of a Single Cell 5' Gel Bead oligo primer. i. Partial Illumina Read 1 Sequence (22 nucleotides (nt)) ii. 16 nt 10x™ Barcode iii. 10 nt Unique Molecular Identifier (UMI) iv. 13 nt Switch Oligo

³⁰ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf); “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

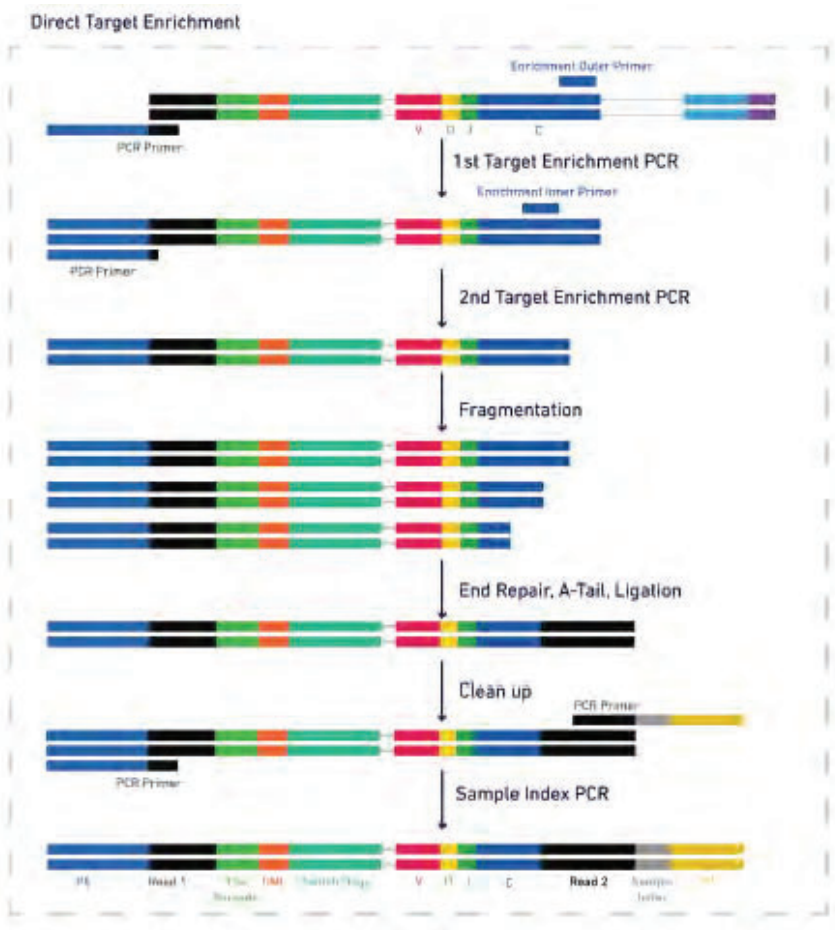
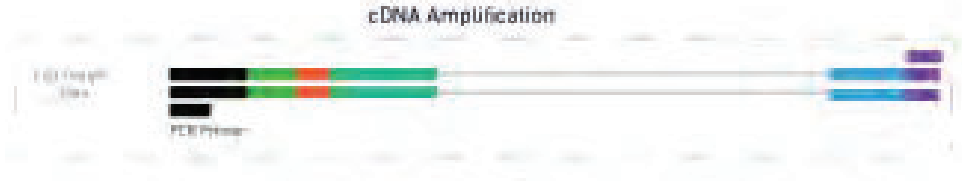
Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		 The diagram illustrates the Single Cell 5' Workflow Accused Products process. It begins with 'Direct Target Enrichment' where a DNA template is shown with a PCR primer (blue) and an enrichment outer primer (red). This is followed by '1st Target Enrichment PCR' using an enrichment inner primer (green). The next step is '2nd Target Enrichment PCR'. This is followed by 'Fragmentation' of the DNA. Then, 'End Repair, A-Tail, Ligation' is performed. The next step is 'Clean up', showing the removal of the PCR primer. Finally, 'Sample Index PCR' is performed, resulting in a final product with a PCR primer (blue) and a sample index (yellow). The final product is labeled with 'Read 1' (V, D, J, C) and 'Read 2' (Sample Index).

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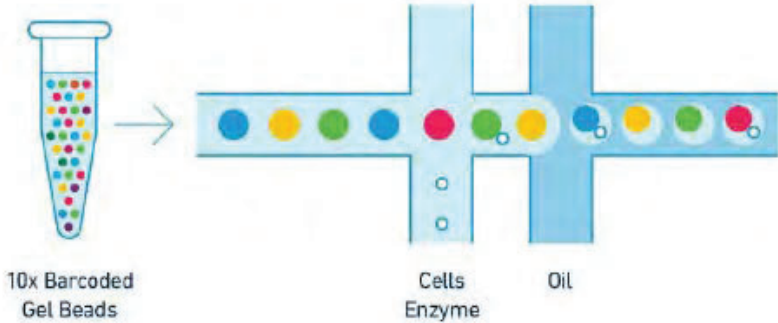
Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		
10	The system of claim 9, wherein a reaction vessel of the plurality of reaction vessels contains a single bead.	See claim 1(b). In the Single Cell 5' Workflow Accused Products, a reaction vessel of the plurality of reaction vessels contains a single bead because the Single Cell 5' Workflow Accused Products partition “thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs).”³¹ As illustrated below,³² “10x Genomics® GemCode™ Technology partitions thousands of cells into droplets, each called a Gel Bead-in-EMulsion (GEM). Once partitioned, the Gel Bead dissolves and its oligo primers are released into the aqueous environment of the GEM. The cell captured in the GEM is also lysed.”³³ As shown below, each GEM contains a single bead.

³¹ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

³² *Id.*

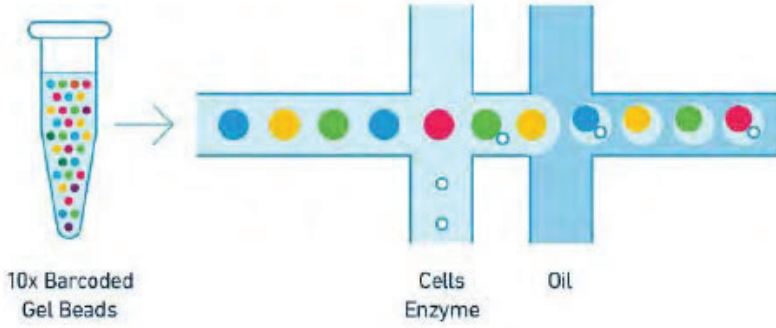
³³ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		
11	The system of claim 10, wherein the reaction vessel of the plurality of reaction vessels that contains a single bead also contains a single cell from said sample comprising cells.	See claim 1(b), claim 10. In the Single Cell 5' Workflow Accused Products, the reaction vessel of the plurality of reaction vessels that contains a single bead also contains a single cell from said sample comprising cells because “the cells are delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.” ³⁴
13	A system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample	The Single Cell 5' Workflow Accused Products are “a system for counting n, wherein n is a number of nucleic acid target molecules that are present in a single cell from a sample comprising cells” because “[t]he 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome . . . by partitioning thousands of cells into nanoliter-scale Gel Bead-In-Emulsions (GEMs).” ³⁵ As illustrated below, ³⁶ “the cells are

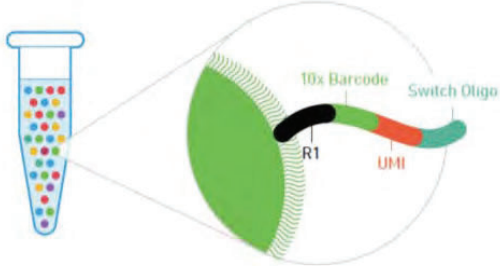
³⁴ *Id.*³⁵ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)³⁶ *Id.*

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
	comprising cells, the system comprising:	delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.”  The Single Cell 5' Workflow Accused Products are for “counting n, wherein n is a number of nucleic acid target molecules” because the “Cell Ranger™” analysis software performs “demultiplexing, alignment, and gene counting”³⁷ and because the information generated with the Cell Ranger software is used for “cell clustering, cell type classification, and differential gene expression at a scale of hundreds to millions of cells.”³⁸ “Cell Ranger is a set of analysis pipelines [that perform gene expression analysis by] alignment, filtering, barcode counting, and UMI counting,”³⁹ which is “counting n, wherein n is a number of nucleic acid target molecules system produces.”
13(a)	a diverse set of labels comprising a plurality of oligonucleotides attached to each bead of	The Single Cell 5' Workflow Accused Products comprise “a diverse set of labels comprising a plurality of oligonucleotides attached to each bead of a plurality of beads, wherein the set of labels comprises m different labels,” because “Gel Beads are... functionalized with millions of

³⁷ *Id.*³⁸ *Id.*³⁹ <https://support.10xgenomics.com/single-cell-gene-expression/software/pipelines/latest/what-is-cell-ranger>

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
	a plurality of beads, wherein the set of labels comprises m different labels, wherein $m > n$,	copies of a 10x Barcoded primer.”⁴⁰ As illustrated below⁴¹, the system comprises “~ 750000 barcodes to separately index each cell’s transcriptome.”⁴² As shown below⁴³, the “diverse set of labels, wherein the set comprises m different labels” in the Single Cell 5' Workflow Accused Products is the “10nt Unique Molecular Identifier.”  Figure 1. Schematic of a Single Cell 5' Gel Bead oligo primer. In the Single Cell 5' Workflow Accused Products, “$m > n$” as recited in step (a) because “[t]he 10x™ GemCode™ Technology... samples a pool of ~ 750000 barcodes to separately index each cell’s transcriptome”⁴⁴ and because the “number of nucleic acid target molecules that are present in a single cell” is less than 150000. For example, single cell analysis shows “~4,500 genes and 27,000 transcripts [...] detected” human and mouse cells.⁴⁵
	and wherein each oligonucleotide of the plurality of oligonucleotides comprises a common	In the Single Cell 5' Workflow Accused Products “each oligonucleotide of the plurality of oligonucleotides comprises a common sequence, a variable target label sequence, and a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule” because the Single Cell 5' Workflow Accused Products contain Gel Beads that comprise

⁴⁰ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁴¹ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

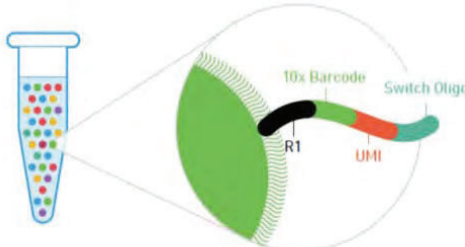
⁴² “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁴³ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

⁴⁴ “Chromium™ Single Cell V(D)J Reagent Kits User Guide”: CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf

⁴⁵ “Chromium™ Single Cell Solutions 10x Single Cell App Note” (10x_Single_Cell_App_Note.pdf)

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
	sequence, a variable target label sequence, and a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule;	“millions of oligo primers”⁴⁶ that comprise different “Unique Molecular Identifiers” that make up “a pool of ~ 750000 barcodes to separately index each cell’s transcriptome.”⁴⁷ As shown below⁴⁸, “each oligonucleotide label of the plurality of oligonucleotide labels” in the Single Cell 5' Workflow Accused Products comprise “a common sequence” (“16 nt 10x Barcode”),⁴⁹ “a variable target label sequence” (“10 nt Unique Molecular Identifier”),⁵⁰ and “a target-specific recognition sequence capable of attaching to or hybridizing to the target molecule” (“13nt Switch Oligo”).  Figure 1. Schematic of a Single Cell 5' Gel Bead oligo primer.
13(b)	a plurality of reaction vessels comprising a single cell from said sample comprising	The Single Cell 5' Workflow Accused Products comprise “a plurality of reaction vessels comprising a single cell from said sample comprising cells and a single bead from said plurality of beads” because the Single Cell 5' Workflow Accused Products partition “thousands of cells into nanoliter-scale Gel Bead-In-EMulsions (GEMs).” ⁵¹ As illustrated

⁴⁶ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

⁴⁷ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁴⁸ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)

⁴⁹ All of the oligonucleotides of a gel bead “share a common 10x Barcode.” See “Chromium™ Single Cell V(D)J Reagent Kits User Guide”

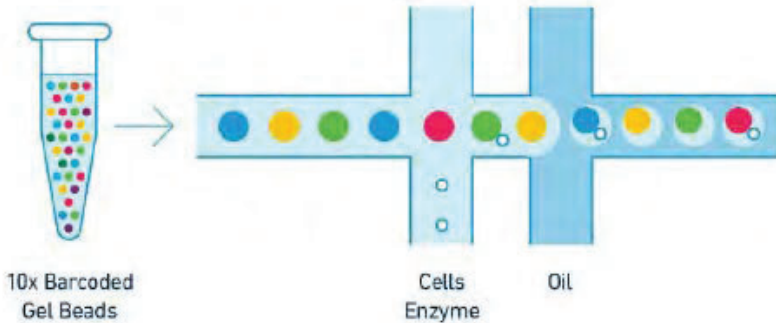
(CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁵⁰ “The 10x™ GemCode™ Technology samples a pool of ~ 750000 barcodes.” See “Chromium™ Single Cell V(D)J Reagent Kits User Guide”

(CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁵¹ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

EXHIBIT 27 - US 9,708,659 Patent - Single Cell 5' Workflow Accused Products

Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
	cells and a single bead from said plurality of beads,	below,⁵² “10x Genomics® GemCode™ Technology partitions thousands of cells into droplets, each called a Gel Bead-in-EMulsion (GEM). Once partitioned, the Gel Bead dissolves and its oligo primers are released into the aqueous environment of the GEM. The cell captured in the GEM is also lysed.”⁵³ As shown below, each GEM contains a single bead. In the Single Cell 5' Workflow Accused Products, the reaction vessel of the plurality of reaction vessels that contains a single bead also contains a single cell from said sample comprising cells because “the cells are delivered at a limiting dilution, such that the majority (~90-99%) of generated GEMs contains no cell, while the remainder largely contain a single cell.”⁵⁴ 
	wherein each reaction vessel is used for attaching a label from the diverse set of labels attached to the bead contained therein to	The Single Cell 5' Workflow Accused Products comprise “each reaction vessel is used for attaching a label from the diverse set of labels attached to the bead contained therein to each occurrence of the nucleic acid target molecules from the single cell contained therein to generate a set of labeled nucleic acid target molecules” because “[t]he contents of the GEM [...] are incubated in a reverse transcription (RT) reaction to generate full-length, barcoded

⁵² *Id.*⁵³ “TECHNICAL NOTE Assay Scheme and Configuration of Chromium™ Single Cell V(D)J Libraries” (CG000109_AssayConfiguration_VDJ_RevD.pdf)⁵⁴ *Id.*

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Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
	each occurrence of the nucleic acid target molecules from the single cell contained therein to generate a set of labeled nucleic acid target molecules, wherein the individual labeled nucleic acid target molecules comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels; and	cDNA from poly-adenylated mRNA.” ⁵⁵ As illustrated below ⁵⁶ , the “labels” hybridize to a reverse transcription product of the “nucleic acid target molecules.” The “set of labeled nucleic acid target molecules” are generated upon a “template switch” step, each of which “comprise all or a portion of the complementary sequence of a nucleic acid target molecule and a label from the diverse set of labels” as shown below.

⁵⁵ *Id.*⁵⁶ *Id.* at Figure 3 (cropped, markings added)

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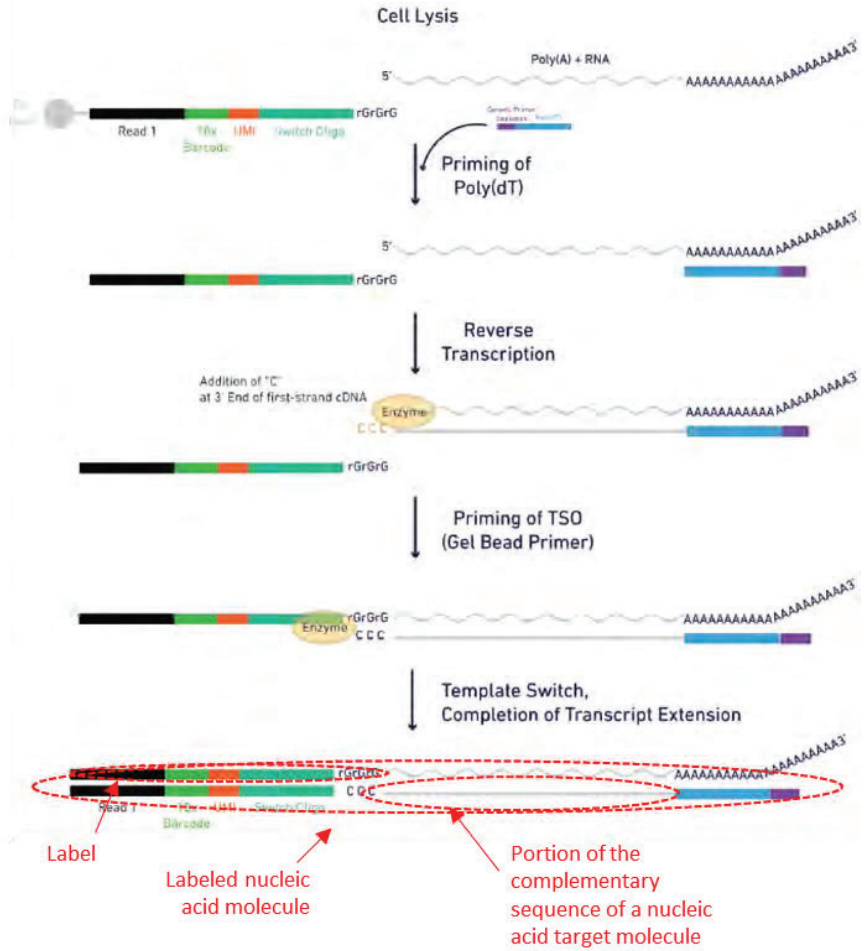
Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
		 The diagram illustrates the Single Cell 5' Workflow process, showing the steps from cell lysis to the final template switch and transcript extension. The process involves the following steps: Cell Lysis: The process begins with a cell containing a target RNA molecule (Poly(A) + RNA) and a bead-bound oligo (Read 1, 10x, 10M, Switch Oligo, rGrGrG). Priming of Poly(dT): A generic primer (5'-3') is added to the RNA, and reverse transcription is performed using an enzyme (C C C) to create a first-strand cDNA. Reverse Transcription: The first-strand cDNA is extended using the enzyme (C C C) to create a second-strand cDNA. Priming of TSO (Gel Bead Primer): A TSO (Gel Bead Primer) is added to the second-strand cDNA, and reverse transcription is performed using the enzyme (C C C) to create a third-strand cDNA. Template Switch, Completion of Transcript Extension: The third-strand cDNA is extended using the enzyme (C C C) to complete the transcript extension. The final product is a labeled nucleic acid molecule (Read 1, 10x, 10M, Switch Oligo, rGrGrG) that is complementary to the target RNA molecule. The diagram also shows the addition of a label (C C C) to the first-strand cDNA and the completion of the transcript extension (C C C). Labels in the diagram include: - Label - Labeled nucleic acid molecule - Portion of the complementary sequence of a nucleic acid target molecule

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Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
13(c)	processing software for counting n from a number of labeled nucleic acid target molecules detected.	The Single Cell 5' Workflow Accused Products comprise “processing software for counting n from a number of labeled nucleic acid target molecules detected” because “the 10x Barcodes are used to associate individual reads back to the individual partitions ⁵⁷ using “Cell Ranger™” analysis software to perform “demultiplexing, alignment, and gene counting.” ⁵⁸ The information generated with the Cell Ranger software is used for “cell clustering, cell type classification, and differential gene expression at a scale of hundreds to millions of cells.” ⁵⁹
16	The system of claim 13, wherein the nucleic acid target molecules present in the sample comprising cells are mRNA molecules, and wherein the labeled nucleic acid target molecules comprise cDNA sequences of the mRNA molecule sequences attached to a label from the diverse set of labels.	<i>See claim 4.</i>
18	The system of claim 13, wherein the oligonucleotides further comprise one or more primer sequences.	<i>See claim 9.</i>

⁵⁷ “Chromium™ Single Cell V(D)J Reagent Kits User Guide” (CG000086_SingleCellVDJReagentKitsUserGuide_RevD.pdf)

⁵⁸ *Id.*

⁵⁹ *Id.*

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Claim Number	Claim Language	Single Cell 5' Workflow Accused Products
19	The system of claim 13, wherein the common sequence for the plurality of oligonucleotides attached to a given bead is different from that for the pluralities of oligonucleotides attached to other beads in the plurality of beads.	In the Single Cell 5' Workflow Accused Products, “the common sequence for the plurality of oligonucleotides attached to a given bead is different from that for the pluralities of oligonucleotides attached to other beads in the plurality of beads” because the “10X barcode” is a “[d]efined DNA sequences that are added to each cDNA generated in a GEM so they can be distinguished and sorted during data analysis.” ⁶⁰ “Upon isothermal incubation, the cDNA produced in each GEM contains a 10x Barcode that identifies them as having originated from the same sample partition.” ⁶¹

⁶⁰ *Id.*⁶¹ *Id.*