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Nucleotide

GenBank

Homo sapiens BRCA2 DNA repair associated (BRCA2), transcript variant 1, mRNA

NCBI Reference Sequence: NM_000059.4

FASTA Graphics

Go to:

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LOCUS       NM_000059               11954 bp    mRNA    linear   PRI 22-JAN-2023
DEFINITION  Homo sapiens BRCA2 DNA repair associated (BRCA2), transcript
            variant 1, mRNA.
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VERSION     NM_000059.4
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            Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 11954)
  AUTHORS   Ogony J, Hoskin TL, Stallings-Mann M, Winham S, Brahmbhatt R,
            Arshad MA, Kannan N, Pena A, Allers T, Brown A, Sherman ME,
            Visscher DW, Knutson KL, Radisky DC and Degnim AC.
  TITLE     Immune cells are increased in normal breast tissues of BRCA1/2
            mutation carriers
  JOURNAL   Breast Cancer Res Treat 197 (2), 277-285 (2023)
   PUBMED   36380012
  REMARK    GeneRIF: Immune cells are increased in normal breast tissues of
            BRCA1/2 mutation carriers.
REFERENCE   2  (bases 1 to 11954)
  AUTHORS   Darabi S, Braxton DR, Xiu J, Carneiro BA, Swensen J, Antonarakis
            ES, Liu SV, McKay RR, Spetzler D, El-Deiry WS and Demeure MJ.
  TITLE     BRCA1/2 Reversion Mutations in Patients Treated with Poly
            ADP-Ribose Polymerase (PARP) Inhibitors or Platinum Agents
  JOURNAL   Medicina (Kaunas) 58 (12), 1818 (2022)
   PUBMED   36557020
  REMARK    GeneRIF: BRCA1/2 Reversion Mutations in Patients Treated with Poly
            ADP-Ribose Polymerase (PARP) Inhibitors or Platinum Agents.
            Publication Status: Online-Only
REFERENCE   3  (bases 1 to 11954)
  AUTHORS   Xie C, Luo J, He Y, Jiang L, Zhong L and Shi Y.
  TITLE     BRCA2 gene mutation in cancer
  JOURNAL   Medicine (Baltimore) 101 (45), e31705 (2022)
   PUBMED   36397405
  REMARK    GeneRIF: BRCA2 gene mutation in cancer.
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REFERENCE   4  (bases 1 to 11954)
  AUTHORS   Shah I, Silva-Santisteban A, Germansky KA, Kandasamy C, Mlabasati
            J, Huang DC, Wadhwa V, Bilal M and Sawhney MS.
  TITLE     Association Between Family History and Risk of Pancreatic Cancer in
            Patients With BRCA1 and BRCA2 Pathogenic Variants
  JOURNAL   Pancreas 51 (7), 733-738 (2022)
   PUBMED   36395396
  REMARK    GeneRIF: Association Between Family History and Risk of Pancreatic
            Cancer in Patients With BRCA1 and BRCA2 Pathogenic Variants.
            Review article
REFERENCE   5  (bases 1 to 11954)
  AUTHORS   Whitney M, Thayer M, Reifsteck C, Olson S, Smith L, Jakobs PM,
            Leach R, Naylor S, Joenje H and Grompe M.
  TITLE     Microcell mediated chromosome transfer maps the Fanconi anaemia
            group D gene to chromosome 3p
  JOURNAL   Nat Genet 11 (3), 341-343 (1995)
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   PUBMED   7581463
REFERENCE   6  (bases 1 to 11954)
  AUTHORS   Schutte M, da Costa LT, Hahn SA, Moskaluk C, Hoque AT, Rozenblum E,
            Weinstein CL, Bittner M, Meltzer PS, Trent JM et al.
  TITLE     Identification by representational difference analysis of a
            homozygous deletion in pancreatic carcinoma that lies within the
            BRCA2 region
  JOURNAL   Proc Natl Acad Sci U S A 92 (13), 5950-5954 (1995)
   PUBMED   7597059
REFERENCE   7  (bases 1 to 11954)
  AUTHORS   Mehta,P.A. and Ebens,C.
  TITLE     Fanconi Anemia
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            LJH, Gripp KW and Amemiya A (Eds.);
            GENEREVIEWS(R);
            (1993)
   PUBMED   20301575
REFERENCE   8  (bases 1 to 11954)
  AUTHORS   Turner,J.T., Brzezinski,J. and Dome,J.S.
  TITLE     Wilms Tumor Predisposition
  JOURNAL   (in) Adam MP, Everman DB, Mirzaa GM, Pagon RA, Wallace SE, Bean
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            GENEREVIEWS(R);
            (1993)
   PUBMED   20301471
REFERENCE   9  (bases 1 to 11954)
  AUTHORS   Petrucelli,N., Daly,M.B. and Pal,T.
  TITLE     BRCA1- and BRCA2-Associated Hereditary Breast and Ovarian Cancer
  JOURNAL   (in) Adam MP, Everman DB, Mirzaa GM, Pagon RA, Wallace SE, Bean
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            (1993)
   PUBMED   20301425
REFERENCE   10 (bases 1 to 11954)
  AUTHORS   Watson,C.G.
  TITLE     The life of a resolution--how ADA policy is made
  JOURNAL   J Conf Workshop, 14-23 (1975)
   PUBMED   1072445
COMMENT     REVIEWED REFSEQ: This record has been curated by NCBI staff. The
            reference sequence was derived from AL445212.9 and AL137247.14.

            On Feb 27, 2020 this sequence version replaced NM_000059.3.

            Summary: Inherited mutations in BRCA1 and this gene, BRCA2, confer
            increased lifetime risk of developing breast or ovarian cancer.
            Both BRCA1 and BRCA2 are involved in maintenance of genome
            stability, specifically the homologous recombination pathway for
            double-strand DNA repair. The largest exon in both genes is exon
            11, which harbors the most important and frequent mutations in
            breast cancer patients. The BRCA2 gene was found on chromosome
            13q12.3 in human. The BRCA2 protein contains several copies of a 70
            aa motif called the BRC motif, and these motifs mediate binding to
            the RAD51 recombinase which functions in DNA repair. BRCA2 is
            considered a tumor suppressor gene, as tumors with BRCA2 mutations
            generally exhibit loss of heterozygosity (LOH) of the wild-type
            allele. [provided by RefSeq, May 2020].

            Publication Note:  This RefSeq record includes a subset of the
            publications that are available for this gene. Please see the Gene
            record to access additional publications.

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            RNAseq introns              :: single sample supports all introns
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                                           [ECO:0000348]
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