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Nucleotide

GenBank

Homo sapiens kinase non-catalytic C-lobe domain containing 1 (KNDC1), transcript variant 2, mRNA

NCBI Reference Sequence: NM_001347864.2

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LOCUS	NM_001347864	2917 bp	mRNA	linear	PRI 18-DEC-2022
DEFINITION	Homo sapiens kinase non-catalytic C-lobe domain containing 1 (KNDC1), transcript variant 2, mRNA.				
ACCESSION	NM_001347864				
VERSION	NM_001347864.2				
KEYWORDS	RefSeq.				
SOURCE	Homo sapiens (human)				
ORGANISM	Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini; Catarrhini; Hominidae; Homo.				
REFERENCE	1 (bases 1 to 2917)				
AUTHORS	Ji J, Hao Z, Liu H, Liu Y, Liu J, Lin B, Ma C and Lin Y.				
TITLE	Effect of KNDC1 overexpression on the senescence of human umbilical vein endothelial cells				
JOURNAL	Mol Med Rep 17 (5), 7037-7044 (2018)				
PUBMED	29568929				
REMARK	GeneRIF: The results demonstrated that KNDC1 overexpression possibly inhibited HUVEC activity and function and promoted HUVEC senescence. Mechanistic studies demonstrated that KNDC1 triggered a p53ROS positive feedback loop, which serves a crucial role in regulating senescence.				
REFERENCE	2 (bases 1 to 2917)				
AUTHORS	Hayashi K, Furuya A, Sakamaki Y, Akagi T, Shinoda Y, Sadakata T, Hashikawa T, Shimizu K, Minami H, Sano Y, Nakayama M and Furuichi T.				
TITLE	The brain-specific RasGEF very-KIND is required for normal dendritic growth in cerebellar granule cells and proper motor coordination				
JOURNAL	PLoS One 12 (3), e0173175 (2017)				
PUBMED	28264072				
REMARK	Publication Status: Online-Only				
REFERENCE	3 (bases 1 to 2917)				
AUTHORS	Zhang C, Zhen YZ, Lin YJ, Liu J, Wei J, Xu R and Hu G.				
TITLE	KNDC1 knockdown protects human umbilical vein endothelial cells from senescence				
JOURNAL	Mol Med Rep 10 (1), 82-88 (2014)				
PUBMED	24788352				
REMARK	GeneRIF: KNDC1 knockdown promoted HUVEC proliferation via the extracellular signal-regulated kinase signaling pathway and delayed HUVEC senescence by inhibiting the p53-p21-p16 transduction cascade.				
COMMENT	REVIEWED REFSEQ : This record has been curated by NCBI staff. The reference sequence was derived from AL445199.37 .				

On May 31, 2019 this sequence version replaced [NM_001347864.1](#).

Summary: The protein encoded by this gene is a Ras guanine nucleotide exchange factor that appears to negatively regulate dendritic growth in the brain. Knockdown of this gene in senescent umbilical vein endothelial cells partially reversed the senescence, showing that this gene could potentially be targeted by anti-aging therapies. [provided by RefSeq, Dec 2016].

Transcript Variant: This variant (2) differs in the 3' UTR and coding sequence compared to variant 1. The resulting isoform (2) has a shorter and distinct C-terminus compared to isoform 1.

Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.

##Evidence-Data-START##

Transcript exon combination :: DRR138524.65538.1,
SRR1803613.121259.1 [ECO:0000332]
RNAseq introns :: single sample supports all introns
SAMEA1966682, SAMEA1968189
[ECO:0000348]

##Evidence-Data-END##

COMPLETENESS: complete on the 3' end.

PRIMARY	REFSEQ_SPAN	PRIMARY_IDENTIFIER	PRIMARY_SPAN	COMP
	1-351	AL445199.37	129302-129652	
	352-550	AL445199.37	136464-136662	
	551-2917	AL445199.37	137337-139703	

FEATURES	Location/Qualifiers
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CDS	250..762 /gene="KNDC1" /gene_synonym="bB439H18.3; C10orf23; RASGEF2; v-KIND; Very-KIND" /note="isoform 2 is encoded by transcript variant 2; RasGEF domain family, member 2; protein very KIND; cerebral protein 9; KIND domain-containing protein 1; ras-GEF domain-containing family member 2; kinase non-catalytic C-lobe domain-containing protein 1; kinase non-catalytic C-lobe domain (KIND) containing 1" /codon_start=1 /product="kinase non-catalytic C-lobe domain-containing protein 1 isoform 2" /protein_id="NP_001334793.1" /db_xref="CCDS:CCDS91390.1" /db_xref="GeneID:85442" /db_xref="HGNC:HGNC:29374" /db_xref="MIM:616237" /translation="MQAMDPAADLYEEDGKDLDFYDFEPLPTLPEDENVSLADILS LRDRGLSEQEAWVCLCSLSMRSVAHAAIFQSLCITPDTLAFNTSGNVCFMEQLSDD PEGAFVPEFVDTGNTFEVSAGGNGVPHPPFTSMVASAINSEMHLPGWDLCKWPLAGS GAAAAARFTGL"
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ORIGIN

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