



Resource List (A-Z)

All Resources

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Data & Software

DNA & RNA

Domains & Structures

Genes & Expression

Genetics & Medicine

Genomes & Maps

Homology

Literature

Proteins

Sequence Analysis

Taxonomy

Training & Tutorials

Variation

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November 13 NCBI Minute: Resources for next-gen sequence analysis

06 Nov 2019

On Wednesday, November 13, 2019 at 12 PM_NCBI staff will present a webinar

NIH Biomedical Data Science Codeathon in Pittsburgh, Jan 8-10

30 Oct 2019

NCBI is pleased to announce a Biomedical Data Science Codeathon in

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PubChem BioAssay

PubChem Compound

PubChem Substance

PubMed

Sparcle

Structure

SNP

SRA

Variation





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data analysis task

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Gene sources Genomic	Tabular - 20 per	page - Sort by Relevance	•	s	Send to: -			
Categories Alternatively spliced Annotated genes Non-coding Protein-coding	See KHSRP (KSRP) KH-type splicing regulatory protein in the Gene database ksrp in Homo sapiens Mus musculus Xenopus tropicalis All 5 Gene records							
Sequence content CCDS Ensembl	Items: 1 to 20 of 60 << First < Prev							
RefSeqGene	Name/Gene ID	Description	Location	Aliases	MIM			
Status clear Current	<u>KHSRP</u> ID: 8570	KH-type splicing regulatory protein [<i>Homo sapiens</i> (human)]	Chromosome 19, NC_000019.10 (64131026424811, complement)	FBP2, FUBP2, KSRP, p75	603445			
Show additional filters	Khsrp ID: 16549	KH-type splicing regulatory protein [<i>Mus</i> <i>musculus</i> (house mouse)]	Chromosome 17, NC_000083.6 (5702104957031507, complement)	6330409F21Rik, Fbp2, Fubp2, Ksrp				
	khsrp ID: 100170586	KH-type splicing regulatory protein [<i>Xenopus tropicalis</i> (tropical clawed frog)]	Chromosome 3, NC_030679.1 (130039451130057575, complement)	VgRBP71, fbp2, fubp2, ksrp				
	□ <u>khsrp.S</u> ID: 399189	KH-type splicing regulatory protein S homeolog [<i>Xenopus</i> <i>laevis</i> (African clawed frog)]		XELAEV_18000829mg, VgRBP71, fbp2, fubp2, khsrp-b, ksrp				
	L khsrp.L	KH-type splicing	Chromosome 3L,	XELAEV_18019123mg,				

S NCBI	Resources 🕑	How To 🖂	
Gene		Gene ᅌ	
			Advanced

Full Report -

Send to: -

KHSRP KH-type splicing regulatory protein [Homo sapiens (human)]

Gene ID: 8570, updated on 3-Nov-2019

Summary		2 ?
Official Symbol	KHSRP provided by HGNC	
Official Full Name	KH-type splicing regulatory protein provided by HGNC	
Primary source	HGNC:HGNC:6316	
See related	Ensembl:ENSG0000088247 MIM:603445	
Gene type	protein coding	
RefSeq status	VALIDATED	
Organism	Homo sapiens	
Lineage	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Prima	ites;
	Haplorrhini; Catarrhini; Hominidae; Homo	
Also known as	p75; FBP2; KSRP; FUBP2	
Summary	The KHSRP gene encodes a multifunctional RNA-binding protein implicated in a variety of cellular processes,	
	including transcription, alternative pre-mRNA splicing, and mRNA localization (Min et al., 1997 [PubMed 9136930]	l;
	Gherzi et al., 2004 [PubMed 15175153]).[supplied by OMIM, Apr 2010]	
Expression	Ubiquitous expression in testis (RPKM 37.2), endometrium (RPKM 25.1) and 25 other tissues See more	
Orthologs	mouse all	



S NCBI R	tesources 🕑 How To 🕑	
Nucleotide		
Thu of collac	Nucleotide	
	Advanced	
GenBank -		Send to: -
Homo s	apiens chromosome 19, GRCh38.p13 Primary Assembly	
NCBI Refere	nce Sequence: NC_000019.10	
FASTA Gra	phics	
LOCUS DEFINITION ACCESSION VERSION DBLINK	NC_000019 11710 bp DNA linear CON 09-SEP-2019 Homo sapiens chromosome 19, GRCh38.p13 Primary Assembly. NC_000019 REGION: complement(64131026424811) NC_000019.10 BioProject: PRJNA168	
	Assembly: GCF 000001405.39	
KEYWORDS SOURCE ORGANISM	RefSeq. Homo sapiens (human) <u>Homo sapiens</u> Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini; Catarrhini; Hominidae; Homo.	
REFERENCE CONSRTM TITLE JOURNAL PUBMED	<pre>1 (bases 1 to 11710) International Human Genome Sequencing Consortium Finishing the euchromatic sequence of the human genome Nature 431 (7011), 931-945 (2004) <u>15496913</u></pre>	
REFERENCE AUTHORS	2 (bases 1 to 11710) Grimwood,J., Gordon,L.A., Olsen,A., Terry,A., Schmutz,J., Lamerdin,J., Hellsten,U., Goodstein,D., Couronne,O., Tran-Gyamfi,M., Aerts,A., Altherr,M., Ashworth,L., Bajorek,E., Black,S., Branscomb,E., Caenepeel,S., Carrano,A., Caoile,C., Chan,Y.M., Christensen,M., Cleland,C.A., Copeland,A., Dalin,E., Dehal,P., Denys,M., Detter,J.C., Escobar,J., Flowers,D., Fotopulos,D., Garcia,C., Georgescu,A.M., Glavina,T., Gomez,M., Gonzales,E., Groza,M., Hammon,N., Hawkins,T., Haydu,L., Ho,I., Huang,W., Israni,S., Jett,J., Kadner,K., Kimball,H., Kobayashi,A., Larionov,V., Leem,S.H., Lopez,F., Lou,Y., Lowry,S., Malfatti,S., Martinez,D., McCreadv,P., Medina,C., Morgan,J., Nelson,K.,	

SINCE Resources How to D			Sign in to NCBI
Nucleotide Nucleotide		Search	
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FASTA -	Send to: -	Change region shown	
Homo sapiens chromosome 19, GRCh38.p13 Primary Assembly		Selected region	
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GGGGACCTGTCTAGGGCTGAGCACTTGGGCGAAATGGGGAAGACGAGCATGGGGACTGGCTCTTGGATGC			
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GCCTCCGGGGCTAGAGACTGGCTCCTCCCAAGGTGGGAGGTCCCGTTAAGTGAACGCCTGTGTTCTGGCC			
CTCTGTCGTCTCTCACCCTTGGAGTTGGGTGGGTTCTAGCGTGCATTTGGTCTTATTGCCCATGGAAC		Related information	
CGTCTGATTCTGGGACAGCTTGAAGGGAGGAAGCTGGTGCTGTCAGTTGGTGGGGACAGGCCCCCTGTGG		Assembly	
GCATCCCATGAGTTTTGGCTCTAGGGCAGCGTAGAAAAATGGAGACTGGTGGAAAGGGAGATTCTTAACA		Assembly	
TGGTTTGGGTTTCTAAACCCCAGACTCTGATCCTAAGTTTGCTGGGTTGAGGTTTCTTTAAAGTTGCTCT		BioProject	
TCACGTGTCTGAGATGTAACTTGTGTCCCCATAGAGTCTTGGTTTTTTGTTTG			
ACAGTCTCAATATCACCCAGGCAGGGGTGCAGTGGCACGATCTCAGCACACCACCACCACCACCTCTCCA		Protein	
GTTGAAGTGCTCCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTATAAGTGTGCACCACCACCAGCT			

Primer-BLAST

A tool for finding specific primers

Finding primers specific to your PCR template (using Primer3 and BLAST).							
PCR Template	page Save search parameters Retrieve recent results Publication Tips for finding specific primers						
Enter accession, gi, or FASTA s	equence (A refseq record is preferred) 😡 Clear Range						
NC_000019.10	From To						
	Porward primer 6413102 (a) Clear						
Or, upload FASTA file	Choisir le fichier aucun fichier sél.						
Drimon Domentaria							
Primer Parameters							
Use my own forward primer	lear <u>Clear</u>						
Use my own reverse primer	Clear						
(5'->3' on minus strand)	Min Max						
PCR product size							
# or primers to return	10						
	Min Opt Max Max Tm difference						
Primer melting temperatures	57.0 60.0 63.0 3 🚱						
(1)							
Exon/intron selection	A refseq mRNA sequence as PCR template input is required for options in the section ()						
Exon junction span	No preference						
Exon junction match	Exon at 5' side Exon at 3' side						
	7 4						
	Minimal number of bases that must anneal to exons at the 5' or 3' side of the junction 😡						
Intron inclusion	Primer pair must be separated by at least one intron on the corresponding genomic DNA						

Primer3web version 4.1.	disclaimer cautions	<u>code</u>		
Select the Task for primer selection gen	eric 🗘			
Template masking before primer design	(available species)			
Select species Example: Mus musculus	Nucleotides to mask in 5' direction 1			
Primer failure rate cutoff < 0.1	Nucleotides to mask in 3' direction 0			

Paste source sequence below (5'->3', string of ACGTNacgtn -- other letters treated as N -- numbers and blanks ignored). FASTA format ok. Please N-out undesirable sequence (vector, ALUs, LINEs, etc.) or use a <u>Mispriming Library (repeat library)</u> NONE

		/		
Pick left primer, or use left primer below	 Pick hybridization probe (internal oligo), or use oligo below 		Pick right primer, or use right primer (5' to 3' on opposite strand)	below

Pick Primers Download Settings Reset Form

Go to <u>http://genome.ucsc.edu/index.html</u> click on Genome Browser

UCSC	Genome Bioinformatics
Genomes -	Blat - Tables - Gene Sorter - PCR - VisiGene - Session - FAQ - Help
Genome	UCSC Genome Bioinformatics Site
Browser ENCODE	ecome to the UCSC Genome Browser website. This site contains the reference sequence and working draft assemblies fo Neandertal projects.
Neandertal Blat	We encourage you to explore these sequences with our tools. The <u>Genome Browser</u> zooms and scrolls over chromosomes, sl homology and other information on groups of genes that can be related in many ways. <u>Blat</u> quickly maps your sequence to the database. <u>VisiGene</u> lets you browse through a large collection of <i>in situ</i> mouse and frog images to examine expression patter
Table Browser Gene Sorter	The UCSC Genome Browser is developed and maintained by the Genome Bioinformatics Group, a cross-departmental team University of California Santa Cruz (UCSC). If you have feedback or questions concerning the tools or data on this website, fee
In Silico PCR	News 😒
Genome Graphs	To receive announcements of new genome assembly releases, new software features, updates and training seminars by ema
Galaxy	16 August 2012 - Announcing a Genome Browser for the Medium ground finch
VisiGene Utilities	We have released a browser for the Medium ground finch, <i>Geospiza fortis</i> , reknowned as one of naturalist Charles Darwin's G evolutionary studies, is one of a group of birds that evolved over a few million years from a single ancestral species into multip
 Downloads	food resources. The phenotypic diversity of these birds contributed to Darwin's theory of evolution. The significance of this gen the UCSC Center for Biomolecular Science and Engineering (CBSE).
Release Log Custom Tracks	The initial Medium ground finch genome assembly (GeoFor_1.0, UCSC version geoFor1) is the product of a collaboration bet sequence 100 vertebrate species, and is the first to be released in the UCSC Genome Browser. For more information about t
Microbial Genomes	Bulk downloads of the sequence and annotation data are available via the Genome Browser <u>FTP server</u> or the <u>Downloads</u> part worldwide. See the <u>Credits</u> page for a detailed list of the organizations and individuals who contributed to this release. We'd li UCSC staff members who released this browser: Hiram Clawson and Greg Roe.
Mirrors	

Begin typing the symbol of your gene into the "Search term" box. Select the most appropriate one from the autocomplete list

e Browser	Tools	Mirrors	Downloads	My Data At	oout Us	Help	
enome	Browser	Gateway					
	Clade Mammal	genom	The UCSC (Softw ie Feb. 20	Genome Browser was vare Copyright (c) The I assembly 009 (GRCh37/hg19) 💌	created by th Regents of th chr17:75	ne <u>Genome Bioinforma</u> he University of Califor position 71720-7590863	rnia. All rights reserved. search term TP53 submit
			Clic track	<u>k here to reset</u> the search add custo	browser us m tracks	ser interface settin track hubs config	TP53 (Homo sapiens tumor protein 53 (TP53), transcript variant 1, mRNA.) TP53AIP1 (Homo sapiens tumor protein p53 regulated apoptosis inducing protein 1 (mitochondrial protein, transcript variant 3, mRNA.) TP53BP1 (Homo sapiens tumor protein p53 binding protein 1 (TP53BP1), transcript v TP53BP2 (Homo sapiens tumor protein p53 binding protein 2 (TP53PP2), transcript v
- ha10	aaaamhl		o)				-TP53I11 (Homo sapiens tumor protein p53 inducible protein 11 (TP53I11), mRNA.)
- ng19 rence seq S	uence (GRC	(isequence	uced by the G	Genome Reference	Consortiu	<u>m</u> . For more inforr	TP53I13 (Homo sapiens tumor protein p53 inducible protein 13 (TP53I13), mRNA.) TP53I3 (Homo sapiens tumor protein p53 inducible protein 3 (TP53I3), transcript variated TP53INP1 (Homo sapiens tumor protein p53 inducible nuclear protein 1 (TP53INP1), TP53INP2 (Homo sapiens tumor protein p53 inducible nuclear protein 2 (TP53INP2), TP53RK (Homo sapiens TP53 regulating kinase (TP53RK), mRNA.) TP53TG1 (Homo sapiens TP53 target 1 (non-protein coding) (TP53TG1), non-coding TP53TG3B (Homo sapiens TP53 target 3B (TP53TG3B), transcript variant 2, mRNA.)
cified by th mRNA. Th	ne accession ne following l	n number of a s list shows exam	equenced ge	nomic clone, an ml position queries for	RNA or ES r the huma	ST or STS marker, n genome. See the	TP53TG3B (Homo sapiens TP53 target 3B (TP53TG3B), transcript variant 2, mRNA.) , TP53TG3C (Homo sapiens TP53 target 3C (TP53TG3C), transcript variant 2, mRNA.) ; TP53TG5 (Homo sapiens TP53 target 5 (TP53TG5), mRNA.)

me Browser Response:



On the genome viewer, click on the symbol of your gene in the "UCSC Genes" track, in this case, I clicked on the TP53. Any of those will take you to the next page. Pease, note the direction of the arrows in the gene, since it indicates the direction of transcription. In this case, the 5' end is to the right.



Click on the "Genomic sequence" link in the table called "sequence and Links to Tools and Databases"

Human Gene TP53 (uc010cng.1) Description and Page Index

Description: Homo sapiens tumor protein p53 (TP53), transcript variant 6, mRNA.

RefSeq Summary (NM_001126116): This gene encodes tumor protein p53, which responds to diverse cellular sti in metabolism. p53 protein is expressed at low level in normal cells and at a high level in a variety of transformed ce containing transcription activation, DNA-binding, and oligomerization domains. It is postulated to bind to a p53-bind a tumor suppressor. Mutants of p53 that frequently occur in a number of different human cancers fail to bind the cons not only as somatic mutations in human malignancies, but also as germline mutations in some cancer-prone familie splicing have been found. These variants encode distinct isoforms, which can regulate p53 transcriptional activity. [r **Transcription Chromosome:** chr17 **Strand:** - **Size:** 7,092 **Start:** 7,571,719 **End:** 7,578,811 **Exon Count Coding Size:** 1,909 **Start:** 7,576,624 **End:** 7,578,533 **Exon Count:** 6

Page Index	Sequence and Links	Genetic Associations	CTD	Microarray	RNA Structure	
Protein Structure	Other Species	mRNA Descriptions	Pathways	Other Names	GeneReviews	
Model Information	Methods					

Data last u	odated:	2011-1	2-21
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 Sequence and Links to Tools and Databases 					
Conomio Convene	(abr47:7 574 700		na DNIA (na ave diffe		Destain (200 s.s.)
Genomic Sequence (cnr17.7,571,720-			mRNA (may diller from genome)		Protein (209 aa)
Gene Sorter	Genome Browser	Protein FASTA	Table Schema	BioGPS	CGAP
Ensembl	Entrez Gene	ExonPrimer	GeneCards	Gepis Tissue	H-INV
HGNC	Jackson Lab	MOPED	OMIM	PubMed	Reactome
Stanford SOURCE	UniProtKB	Wikipedia			

Select the "CDs in upper case, UTR in lower case" option.

Also (not indicated in the picture), you may want to select "One FASTA record per region (exon, intron, etc)" since it separates each region into different records.

Get Genomic Sequence Near Gene

Note: if you would prefer to get DNA for more than one feature of this track at a time, try

Sequence Retrieval Region Options:

- Promoter/Upstream by 1000 bases
- 5' UTR Exons
- CDS Exons
- 3' UTR Exons
- Introns
- Downstream by 1000 bases
- One FASTA record per gene.
- One FASTA record per region (exon, intron, etc.) with 0 extra bases upstread
 - Split UTR and CDS parts of an exon into separate FASTA records

Note: if a feature is close to the beginning or end of a chromosome and upstream/dow

Sequence Formatting Options:

Exons in upper case, everything else in lower case.

CDS in upper case, UTR in lower case.

- All upper case.
- All lower case.

🔲 Mask repeats: 💿 to lower case 🔘 to N

submit

>hg19 knownGene uc010cng.1 range=chr17:7571720-7578811 5'pad=0 3'pad=0 strand=- repeatMasking=nor

rgaggccaggagarggaggcrgcagrgagcrgrgarcacaccacrgrgcr gaaaagctcctgaggtgtagacgccaactctctctagctcgctagtgggt tgcaggaggtgcttacgcatgtttgtttctttgctgccgtcttccagttg cctacagtactcccctgccctcaacaagATGTTTTGCCAACTGGCCAAGA GTCCGCGCCATGGCCATCTACAAGCAGTCACAGCACATGACGGAGGTTGT GAGGCGCIGCCCCCCCCCCCGCIGCICCGCICCGAIAGCGAIGGICIGGCCC CTCCTCAGCATCTTATCCGAGTGGAAGGAAATTTGCGTGTGGAGTATTTG GATGACAGAAACACTTTTCGACATAGTGTGGTGGTGCCCTATGAGCCGCC TGAGGTTGGCTCTGACTGTACCACCATCCACTACAACTACATGTGTAACA GTTCCTGCATGGGCGGCATGAACCGGAGGCCCATCCTCACCATCATCACA CTGGAAGACTCCAGTGGTAATCTACTGGGACGGAACAGCTTTGAGGTGCG TGTTTGTGCCTGTCCTGGGAGAGACCGGCGCACAGAGGAAGAGAATCTCC GCAAGAAAGGGGAGCCTCACCACGAGCTGCCCCCAGGGAGCACTAAGCGA GCACTGCCCAACAACACCAGCTCCTCTCCCCAGCCAAAGAAGAAACCACT GGATGGAGAATATTTCACCCTTCAGGACCAGACCAGCTTTCAAAAAGAAA