

RECQL5

Identity

Hugo [RECQL5](#)
Location 17q25.2-25.3

DNA/RNA

Transcription Three different transcripts : 3715 bases (RecQ5a), 3703 bases (RecQ5b), 1749 bases (RecQ5g).

Protein

Description 410 amino acids (RecQ5a), 991 amino acids (RecQ5b), 435 amino acids (RecQ5g). The predicted protein structures of all three polypeptides share seven motifs conserved for DNA helicases. RecQ5b contains a large C-terminal region that includes a domain homologous to the non-helicase domain of the E. coli RecQ DNA helicase.

Localisation RecQ5a and RecQ5g are localized in the cytoplasm, whereas RecQ5b is localized in the nucleus.

Function Unknown

Homology Homologous to RecQ helicases, a subfamily of DExH box-containing DNA and RNA helicases. In particular, similarities with the four known human members in the RecQ subfamily, human [RecQL](#), human [RecQL4](#), human [BLM](#), the product of the Bloom syndrome gene and human [WRN](#), the product of the Werner syndrome gene.

Mutations

Note Not described yet, and correlation with genetic disorder, if any, is unknown.

External links

	Nomenclature
Hugo	RECQL5
GDB	RECQL5
Entrez Gene	RECQL5 9400 RecQ protein-like 5
	Cards
Atlas	RECQL5ID286
GeneCards	RECQL5
Ensembl	RECQL5
Genatlas	RECQL5

GeneLynx	RECQL5
eGenome	RECQL5
euGene	9400
Genomic and cartography	
GoldenPath	RECQL5 - chr17:71156540-71174864 - 17q25.1 (hg17-May_2004)
Ensembl	RECQL5 - 17q25.1 [CytoView]
NCBI	Genes Cyto Gene Seq [Map View - NCBI]
OMIM	Disease map [OMIM]
HomoloGene	RECQL5

Gene and transcription

Genbank	AF135183 [SRS] AF135183 [ENTREZ]
Genbank	AB006533 [SRS] AB006533 [ENTREZ]
Genbank	AB042823 [SRS] AB042823 [ENTREZ]
Genbank	AB042824 [SRS] AB042824 [ENTREZ]
Genbank	AB042825 [SRS] AB042825 [ENTREZ]
RefSeq	NM_001003715 [SRS] NM_001003715 [ENTREZ]
RefSeq	NM_001003716 [SRS] NM_001003716 [ENTREZ]
RefSeq	NM_004259 [SRS] NM_004259 [ENTREZ]
RefSeq	NT_086886 [SRS] NT_086886 [ENTREZ]
AceView	RECQL5 AceView - NCBI
TRASER	RECQL5 Traser - Stanford
Unigene	Hs.514480 [SRS] Hs.514480 [NCBI] HS514480 [spliceNest]

Protein : pattern, domain, 3D structure

SwissProt	O94762 [SRS] O94762 [EXPASY] O94762 [INTERPRO]
Prosite	PS00690 DEAH ATP HELICASE [SRS] PS00690 DEAH ATP HELICASE [Expasy]
Interpro	IPR001410 DEAD [SRS] IPR001410 DEAD [EBI]
Interpro	IPR002464 DEAH_box [SRS] IPR002464 DEAH_box [EBI]
Interpro	IPR001650 Helicase_C [SRS] IPR001650 Helicase_C [EBI]
Interpro	IPR004589 RecQ [SRS] IPR004589 RecQ [EBI]
Interpro	IPR010716 RecQ5 [SRS] IPR010716 RecQ5 [EBI]
CluSTr	O94762
Pfam	PF00270 DEAD [SRS] PF00270 DEAD [Sanger] pfam00270 [NCBI-CDD]
Pfam	PF00271 Helicase_C [SRS] PF00271 Helicase_C [Sanger] pfam00271 [NCBI-CDD]
Pfam	PF06959 RecQ5 [SRS] PF06959 RecQ5 [Sanger] pfam06959 [NCBI-CDD]
Smart	SM00487 DEXDc [EMBL]

[Smart](#) [SM00490 HELICc](#) [EMBL]

[Blocks](#) [O94762](#)

Polymorphism : SNP, mutations, diseases

[OMIM](#) [603781](#) [[map](#)]

[GENECLINICS](#) [603781](#)

[SNP](#) [RECQL5](#) [dbSNP-NCBI]

[SNP](#) [NM_001003715](#) [SNP-NCI]

[SNP](#) [NM_001003716](#) [SNP-NCI]

[SNP](#) [NM_004259](#) [SNP-NCI]

[SNP](#) [RECQL5](#) [GeneSNPs - Utah] [RECQL5](#) [SNP - CSHL] [RECQL5](#) [HGBASE - SRS]

General knowledge

[Family Browser](#) [RECQL5](#) [UCSC Family Browser]

[SOURCE](#) [NM_001003715](#)

[SOURCE](#) [NM_001003716](#)

[SOURCE](#) [NM_004259](#)

[SMD](#) [Hs.514480](#)

[SAGE](#) [Hs.514480](#)

[Amigo](#) [function|ATP binding](#)

[Amigo](#) [function|ATP-dependent helicase activity](#)

[Amigo](#) [function|DNA helicase activity](#)

[Amigo](#) [process|DNA repair](#)

[Amigo](#) [function|hydrolase activity](#)

[Amigo](#) [function|nucleic acid binding](#)

[Amigo](#) [component|nucleus](#)

[PubGene](#) [RECQL5](#)

Other databases

Probes

[Probe](#) [RECQL5 Related clones \(RZPD - Berlin\)](#)

PubMed

[PubMed](#) [4 Pubmed reference\(s\) in LocusLink](#)

Bibliography

Cloning of two new human helicase genes of the RecQ family: biological significance of multiple species in higher eukaryotes.

Kitao, S.; Ohsugi, I.; Ichikawa, K.; Goto, M.; Furuichi, Y.; Shimamoto, A.
Genomics. 1998, 54: 443-452.

Medline [9878247](#)

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Kawabe, T. ; Tsuyama, N. ; Kitao, S. ; Nishikawa, K. ; Shimamoto, A. ; Shiratori, M. ;
Matsumoto, T. ; Anno, K. ; Sato, T. ; Mitsui, Y. ; Seki, M. ; Enomoto, T. ; Goto, M. ;
Ellis, NA. ; Ide, T. ; Furuichi, Y. ; Sugimoto, M.

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Medline [11032027](#)

Human RecQ5beta, a large isomer of RecQ5 DNA helicase, localizes in the nucleoplasm and interacts with topoisomerases 3alpha and 3beta.

Shimamoto, A.; Nishikawa, K.; Kitao, S.; Furuichi, Y.

Nucleic Acids Res. 2000, 28: 1647-1655.

Medline [0710432](#)

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[BiblioGene - INIST](#)

Contributor(s)

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