

PAX5 (paired box gene 5)

Identity

Other names	BSAP (B-cell lineage specific activator protein)
Hugo	<u>PAX5</u>
Location	9p13

DNA/RNA

Description	The PAX5 coding region extends over a genomic interval of approximately 200kb and comprises 10 exons.
Transcription	Two alternative transcripts have been identified, originating from alternative promotor usage, containing exon 1A or 1B; full length mRNA is 3650bp; transcription is from centromere to telomere.

Protein

Description	391 amino acids, 42 kDa, PAX5 belongs to the paired box family of transcription factors, contains a paired box (DNA binding) domain, a truncated homeo domain homology region, and a transactivation domain.
Expression	B lymphocytes, the developing CNS, and adult testis.
Localisation	Nuclear
Function	Involved in a multitude of developmental processes, PAX5 expression is not only continuously required for B cell lineage commitment during early B cell development but also for B lineage maintenance, involved in the regulation of the CD19 gene, a B-lymphoid-specific target gene.

Implicated in

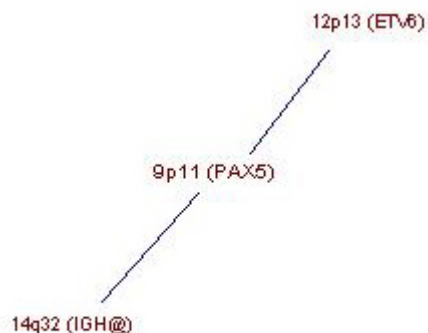
Entity [t\(9;14\)\(p13;q23\)](#) lymphoproliferative disorders

Hybrid/Mutated Gene PAX5 - [IGH](#) juxtaposition

Entity [dic\(9;12\)\(p13;p13\)](#) acute lymphoblastic leukemia

Hybrid/Mutated Gene PAX5 - [ETV6](#)

Breakpoints



PAX5 and partners. Editor 08/2005.

External links

[Hugo](#)

[GDB](#)

[Entrez_Gene](#)

[Atlas](#)

[GeneCards](#)

[Ensembl](#)

[CancerGene](#)

[Genatlas](#)

[GeneLynx](#)

[eGenome](#)

[euGene](#)

[GoldenPath](#)

[Ensembl](#)

[NCBI](#)

[OMIM](#)

[HomoloGene](#)

[Genbank](#)

[Genbank](#)

[Genbank](#)

[Genbank](#)

[Genbank](#)

[RefSeq](#)

Nomenclature

[PAX5](#)

[PAX5](#)

[PAX5_5079](#) paired box gene 5 (B-cell lineage specific activator)

Cards

[PAX5ID62](#)

[PAX5](#)

[PAX5](#)

[PAX5](#)

[PAX5](#)

[PAX5](#)

[PAX5](#)

[5079](#)

Genomic and cartography

[PAX5](#) - [9p13](#) [chr9:36828531-37024476](#) - [9p13.2](#) (hg17-May_2004)

[PAX5](#) - [9p13.2](#) [\[CytoView\]](#)

[Genes Cyto](#) [Gene Seq](#) [Map View - NCBI]

[Disease map](#) [\[OMIM\]](#)

[PAX5](#)

Gene and transcription

[AF074913](#) [SRS] [AF074913](#) [ENTREZ]

[AF268279](#) [SRS] [AF268279](#) [ENTREZ]

[AF386790](#) [SRS] [AF386790](#) [ENTREZ]

[U56835](#) [SRS] [U56835](#) [ENTREZ]

[U56836](#) [SRS] [U56836](#) [ENTREZ]

[NM_016734](#) [SRS] [NM_016734](#) [ENTREZ]

RefSeq	NT_086749 [SRS] NT_086749 [ENTREZ]
AceView	PAX5 AceView - NCBI
TRASER	PAX5 Traser - Stanford
Unigene	Hs.126365 [SRS] Hs.126365 [NCBI] HS126365 [spliceNest]
Protein : pattern, domain, 3D structure	
SwissProt	Q02548 [SRS] Q02548 [EXPASY] Q02548 [INTERPRO]
Prosite	PS00034 PAIRED_BOX [SRS] PS00034 PAIRED_BOX [Expasy]
Interpro	IPR009057 Homeodomain_like [SRS] IPR009057 Homeodomain_like [EBI]
Interpro	IPR001523 Paired_box_N [SRS] IPR001523 Paired_box_N [EBI]
CluSTr	Q02548
Pfam	PF00292 PAX [SRS] PF00292 PAX [Sanger] pfam00292 [NCBI-CDD]
Smart	SM00351 PAX [EMBL]
Blocks	Q02548
PDB	1K78 [SRS] 1K78 [PdbSum], 1K78 [IMB]
PDB	1MDM [SRS] 1MDM [PdbSum], 1MDM [IMB]
Polymorphism : SNP, mutations, diseases	
OMIM	167414 [map]
GENECLINICS	167414
SNP	PAX5 [dbSNP-NCBI]
SNP	NM_016734 [SNP-NCI]
SNP	PAX5 [GeneSNPs - Utah] PAX5 [SNP - CSHL] PAX5 [HGBASE - SRS]
General knowledge	
Family Browser	PAX5 [UCSC Family Browser]
SOURCE	NM_016734
SMD	Hs.126365
SAGE	Hs.126365
Amigo	function DNA binding
Amigo	process cell differentiation
Amigo	process development
Amigo	process humoral immune response
Amigo	process neurogenesis
Amigo	component nucleus
Amigo	process regulation of transcription, DNA-dependent
Amigo	process spermatogenesis
Amigo	process transcription
Amigo	process transcription from Pol II promoter

[PubGene](#)

[PAX5](#)

Other databases

Probes

[Probe](#)

[PAX5 Related clones \(RZPD - Berlin\)](#)

PubMed

[PubMed](#)

[17 Pubmed reference\(s\) in LocusLink](#)

Bibliography

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Contributor(s)

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URL : <http://www.infobiogen.fr/services/chromcancer/Genes/PAX5ID62.html>

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URL : <http://www.infobiogen.fr/services/chromcancer/Genes/PAX5ID62.html>

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