

## MALT1

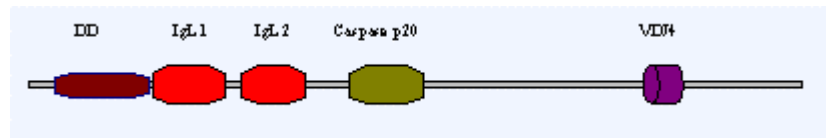
### Identity

Other names	<b>MLT</b>
	<b>huParacaspase</b>
Hugo	<b><u>MALT1</u></b>
Location	18q21

### DNA/RNA

Description	centromere to telomere orientation; 17 exons spread over 80 kb of genomic sequence, start codon in exon1, stop in exon 17
Transcription	2 alternative transcripts, probably due to alternative polyadenylation.

### Protein

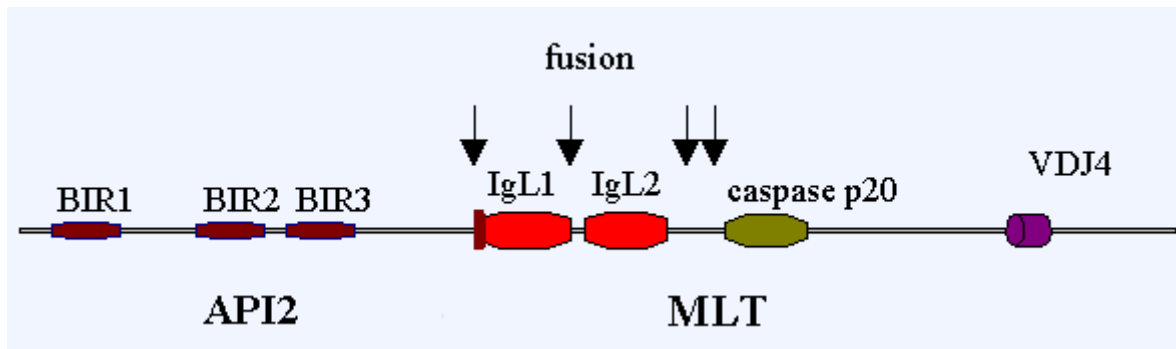


MALT1 protein - Baens Mathijs, Peter Marynen

Description	92 kDa; 824 amino acids; The prodomain contains a Death Domain (homotypic interaction module), followed by two immunoglobulin-like domains, a predicted caspase-like proteolytic domain (p20) and a region with homology to the murine VDJ4 sequence
Localisation	cytoplasmic
Homology	with the predicted ORF from the <i>C. elegans</i> F22D3.6

### Implicated in

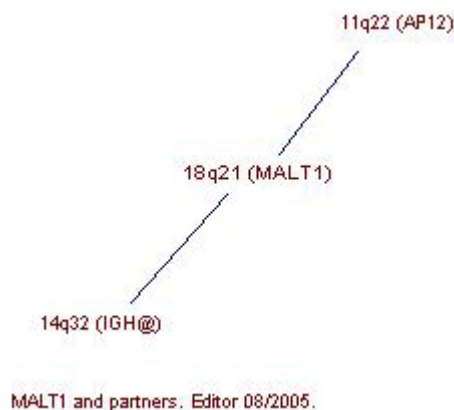
Entity	<a href="#">t(11;18)(q21;q21)</a> / <a href="#">marginal zone B-cell lymphoma</a> of <a href="#">MALT-type</a> --> <a href="#">BIRC3</a> - MALT1
Disease	<a href="#">B-cell non Hodgkin lymphoma</a> (NHL); marginal zone B-cell lymphoma (MZBCL) of mucosa-associated lymphoid tissue (MALT); found in extranodal MZBCL or MALT-type (50%), absent in splenic and nodal MZBCL
Prognosis	For gastric MALT-type lymphomas, t(11;18) is a clonal marker for resistance to <i>Helicobacter pylori</i> eradication therapy and antigen independent growth
Cytogenetics	t(11;18) is frequently associated with deletions affecting 3' API2 on chromosome 11 or 5' MALT1 on chromosome 18.



BIRC3/MALT1 fusion protein - Baens Mathijs, Peter Marynen

Hybrid/Mutated Gene	5' API2 on chromosome 11q21 translocated on chromosome 18 in frame with 3' MALT1. Deletions often exclude the expression of the reciprocal 5' MALT API2 3' transcript.
Abnormal Protein	All MALT-type lymphomas reported with a t(11;18) express an in frame API2-MLT fusion protein with consistently the three BIR domains of API2 fused to the caspase p20 domain and VDJ4-like domain of MLT.
Oncogenesis	Transient expression of the API2-MLT fusion protein activates an NF-KB luciferase reporter construct, suggesting the involvement of this signaling cascade in MALT lymphomagenesis

## Breakpoints



## External links

	<b>Nomenclature</b>
<a href="#">Hugo</a>	<a href="#">MALT1</a>
<a href="#">GDB</a>	<a href="#">MALT1</a>
<a href="#">Entrez Gene</a>	<a href="#">MALT1_10892</a> mucosa associated lymphoid tissue lymphoma translocation gene 1

## Cards

[Atlas](#) [MALT1ID240](#)

[GeneCards](#) [MALT1](#)

[Ensembl](#) [MALT1](#)

[Genatlas](#) [MALT1](#)

[GeneLynx](#) [MALT1](#)

[eGenome](#) [MALT1](#)

[euGene](#) [10892](#)

### Genomic and cartography

[GoldenPath](#) [MALT1 - 18q21](#) [chr18:54489598-54568350 + 18q21.32](#) (hg18-Mar\_2006)

[Ensembl](#) [MALT1 - 18q21.32 \[CytoView\]](#)

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

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

[HomoloGene](#) [MALT1](#)

### Gene and transcription

[Genbank](#) [AB026118](#) [ENTREZ]

[Genbank](#) [AF130356](#) [ENTREZ]

[Genbank](#) [AF316597](#) [ENTREZ]

[Genbank](#) [AK024859](#) [ENTREZ]

[Genbank](#) [AK092004](#) [ENTREZ]

[RefSeq](#) [NM\\_006785](#) [SRS] [NM\\_006785](#) [ENTREZ]

[RefSeq](#) [NM\\_173844](#) [SRS] [NM\\_173844](#) [ENTREZ]

[AceView](#) [MALT1](#) AceView - NCBI

[TRASER](#) [MALT1](#) Traser - Stanford

[Unigene](#) [Hs.180566](#) [SRS] [Hs.180566](#) [NCBI] [HS180566](#) [spliceNest]

### Protein : pattern, domain, 3D structure

[SwissProt](#) [Q9UDY8](#) [SRS] [Q9UDY8](#) [EXPASY] [Q9UDY8](#) [INTERPRO]

[Prosite](#) [PS50208 CASPASE\\_P20](#) [SRS] [PS50208 CASPASE\\_P20](#) [Expasy]

[Prosite](#) [PS50017 DEATH\\_DOMAIN](#) [SRS] [PS50017 DEATH\\_DOMAIN](#) [Expasy]

[Prosite](#) [PS50835 IG\\_LIKE](#) [SRS] [PS50835 IG\\_LIKE](#) [Expasy]

[Interpro](#) [IPR000488 Death](#) [SRS] [IPR000488 Death](#) [EBI]

[Interpro](#) [IPR011029 DEATH\\_like](#) [SRS] [IPR011029 DEATH\\_like](#) [EBI]

[Interpro](#) [IPR001309 ICE\\_p20](#) [SRS] [IPR001309 ICE\\_p20](#) [EBI]

[Interpro](#) [IPR013151 Iq](#) [SRS] [IPR013151 Iq](#) [EBI]

[Interpro](#) [IPR007110 Iq-like](#) [SRS] [IPR007110 Iq-like](#) [EBI]

[Interpro](#) [IPR003599 Iq\\_sub](#) [SRS] [IPR003599 Iq\\_sub](#) [EBI]

[Interpro](#) [IPR003598 Iq\\_sub2](#) [SRS] [IPR003598 Iq\\_sub2](#) [EBI]

[Interpro](#) [IPR011600 Pept\\_C14\\_cat](#) [SRS] [IPR011600 Pept\\_C14\\_cat](#) [EBI]

<a href="#">CluSTr</a>	<a href="#">Q9UDY8</a>
<a href="#">Pfam</a>	<a href="#">PF00047 ig</a> [ SRS ] <a href="#">PF00047 ig</a> [ Sanger ] <a href="#">pfam00047</a> [ NCBI-CDD ]
<a href="#">Pfam</a>	<a href="#">PF00656 Peptidase_C14</a> [ SRS ] <a href="#">PF00656 Peptidase_C14</a> [ Sanger ] <a href="#">pfam00656</a> [ NCBI-CDD ]
<a href="#">Smart</a>	<a href="#">SM00409 IG</a> [EMBL]
<a href="#">Smart</a>	<a href="#">SM00408 IGc2</a> [EMBL]
<a href="#">Blocks</a>	<a href="#">Q9UDY8</a>
<a href="#">HPRD</a>	<a href="#">Q9UDY8</a>
<b>Protein Interaction databases</b>	
<a href="#">DIP</a>	<a href="#">Q9UDY8</a>
<a href="#">IntAct</a>	<a href="#">Q9UDY8</a>
<b>Polymorphism : SNP, mutations, diseases</b>	
<a href="#">OMIM</a>	<a href="#">604860</a> [ map ]
<a href="#">GENECLINICS</a>	<a href="#">604860</a>
<a href="#">SNP</a>	<a href="#">MALT1</a> [dbSNP-NCBI]
<a href="#">SNP</a>	<a href="#">NM_006785</a> [SNP-NCI]
<a href="#">SNP</a>	<a href="#">NM_173844</a> [SNP-NCI]
<a href="#">SNP</a>	<a href="#">MALT1</a> [GeneSNPs - Utah] <a href="#">MALT1</a> [HGBASE - SRS]
<a href="#">HAPMAP</a>	<a href="#">MALT1</a> [HAPMAP]
<b>General knowledge</b>	
<a href="#">Family Browser</a>	<a href="#">MALT1</a> [UCSC Family Browser]
<a href="#">SOURCE</a>	<a href="#">NM_006785</a>
<a href="#">SOURCE</a>	<a href="#">NM_173844</a>
<a href="#">SMD</a>	<a href="#">Hs.180566</a>
<a href="#">SAGE</a>	<a href="#">Hs.180566</a>
<a href="#">Enzyme</a>	<a href="#">3.4.22.-</a> [ Enzyme-SRS ] <a href="#">3.4.22.-</a> [ Brenda-SRS ] <a href="#">3.4.22.-</a> [ KEGG ] <a href="#">3.4.22.-</a> [ WIT ]
<a href="#">Amigo</a>	<a href="#">signal transducer activity</a>
<a href="#">Amigo</a>	<a href="#">protein binding</a>
<a href="#">Amigo</a>	<a href="#">intracellular</a>
<a href="#">Amigo</a>	<a href="#">proteolysis</a>
<a href="#">Amigo</a>	<a href="#">anti-apoptosis</a>
<a href="#">Amigo</a>	<a href="#">defense response</a>
<a href="#">Amigo</a>	<a href="#">activation of NF-kappaB-inducing kinase</a>
<a href="#">Amigo</a>	<a href="#">peptidase activity</a>
<a href="#">Amigo</a>	<a href="#">caspase activity</a>
<a href="#">Amigo</a>	<a href="#">regulation of apoptosis</a>
<a href="#">Amigo</a>	<a href="#">positive regulation of I-kappaB kinase/NF-kappaB cascade</a>

[PubGene](#)

[MALT1](#)

**Other databases**

**Probes**

[Probe](#)

[MALT1 Related clones \(RZPD - Berlin\)](#)

**PubMed**

[PubMed](#)

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

## **Bibliography**

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Medline [10907943](#)

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Medline [10979968](#)

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Genes Chromosom Cancer 2000; 29: 281-291.  
Medline [11066071](#)

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Medline [11090634](#)

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                 2001

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URL : <http://AtlasGeneticsOncology.org/Genes/MALT1ID240.html>

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