

## Product datasheet for **UM500009**

### CD5 Mouse Monoclonal Antibody [Clone ID: UMAB9]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	UMAB9
Applications:	FC, IF, IHC, WB
Recommended Dilution:	WB 1:500, IHC 1:100, IF 1:100, FLOW 1:100, IF 1:100
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human CD5 (NP_055022) produced in HEK293T cell.
Formulation:	PBS (pH 7.3) containing 1% BSA, 50% glycerol and 0.02% sodium azide.
Concentration:	0.5~1.0 mg/ml (Lot Dependent)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	54.4 kDa
Gene Name:	CD5 molecule
Database Link:	<a href="#">NP_055022</a> <a href="#">Entrez Gene 921 Human</a> <a href="#">P06127</a>

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**Background:**

CD5 is a cluster of differentiation found on a subset of IgM-secreting B cells called B-1 cells, and also on T cells. B-1 cells have limited diversity of their B-cell receptor due to their lack of the enzyme terminal deoxynucleotidyl transferase (TdT) and are potentially self-reactive. CD5 serves to mitigate activating signals from the BCR so that the B-1 cells can only be activated by very strong stimuli (such as bacterial proteins) and not by normal tissue proteins. CD5 is a good immunohistochemical marker for T-cells. About 76% of T-cell neoplasms are reported to express CD5, and it is also found in chronic lymphocytic leukemia, hairy cell leukaemia, and mantle cell lymphoma cells. It is commonly lost in cutaneous T-cell lymphoma, and its absence can be used as an indicator of malignancy in this condition. The absence of CD5 in T cell acute lymphoblastic leukaemia, while relatively rare, is associated with a poor prognosis.

**Synonyms:**

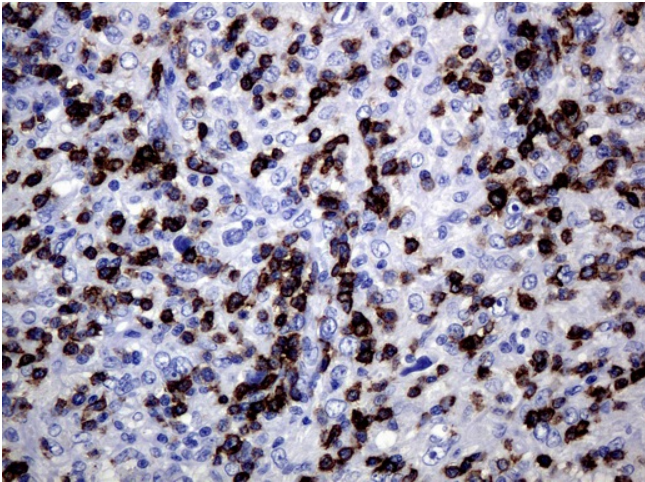
LEU1; T1

**Protein Families:**

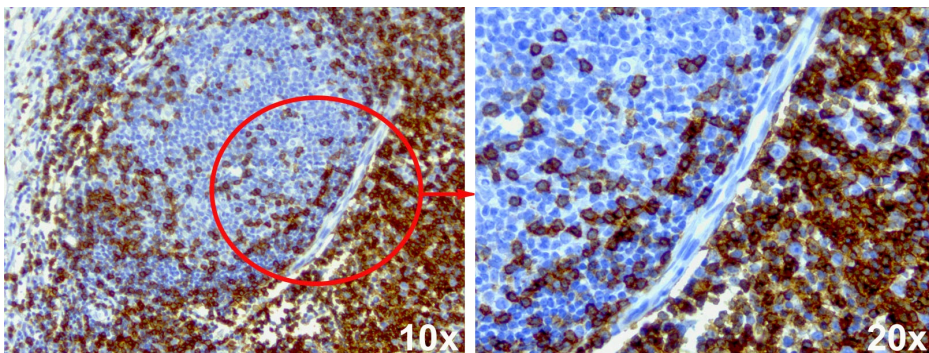
Druggable Genome, Transmembrane

**Protein Pathways:**

Hematopoietic cell lineage

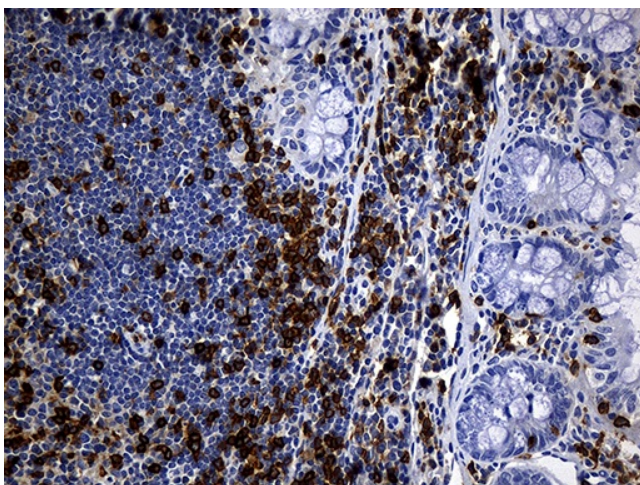
**Product images:**


Immunohistochemical staining of paraffin-embedded Human lymphoma tissue using anti-CD5 mouse monoclonal antibody. (Clone UMAB9, dilution 1:100; heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 120°C for 3min)

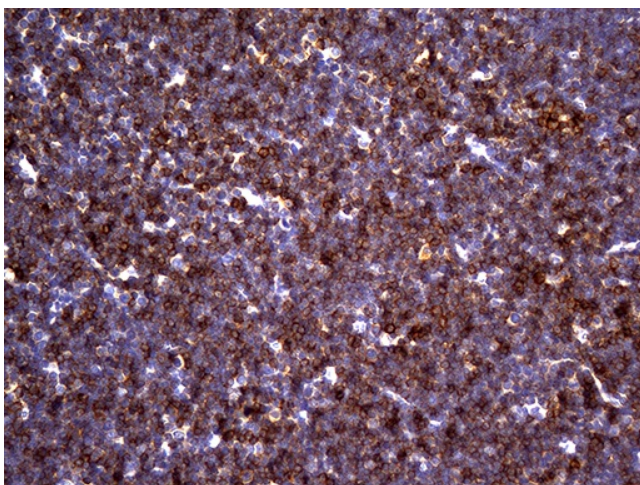


Immunohistochemical staining of paraffin-embedded human tonsil using anti-CD5 clone UMAB9 mouse monoclonal antibody at 1:200 dilution of 0.1mg/mL detection with Polink2 Broad HRP DAB (UM500009 requires heat-induced epitope retrieval with Citrate pH6.0 at 95-100C 20 minutes. The image shows strong membranous and cytoplasmic staining in >75 % of non germinal center cells of tonsil and <20% of the germinal center cells. No staining was seen in the squamous epithelia cells.

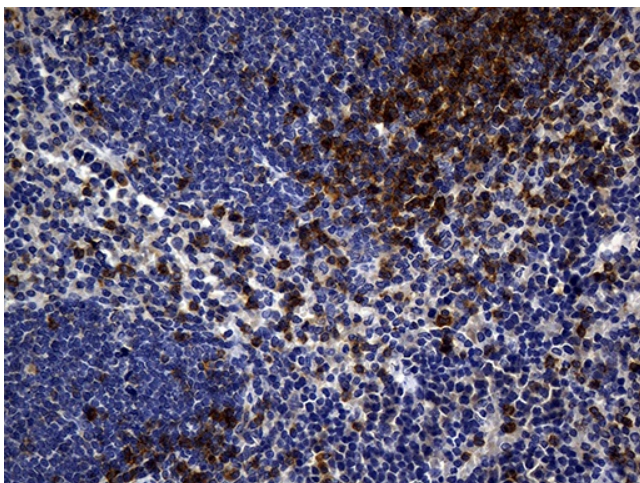




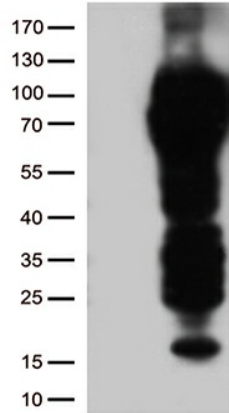
Immunohistochemical staining of paraffin-embedded mouse ascending colon tissue using anti-CD5 clone UMAB9 mouse monoclonal antibody. (Heat-induced epitope retrieval by 1mM EDTA in 10mM Tris buffer (pH8.5) at 120°C for 3min, UM500009) (1:300).



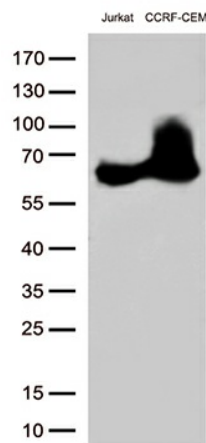
Immunohistochemical staining of paraffin-embedded mouse thymus tissue using anti-CD5 clone UMAB9 mouse monoclonal antibody. (Heat-induced epitope retrieval by 1mM EDTA in 10mM Tris buffer (pH8.5) at 120°C for 3min, UM500009) (1:300).



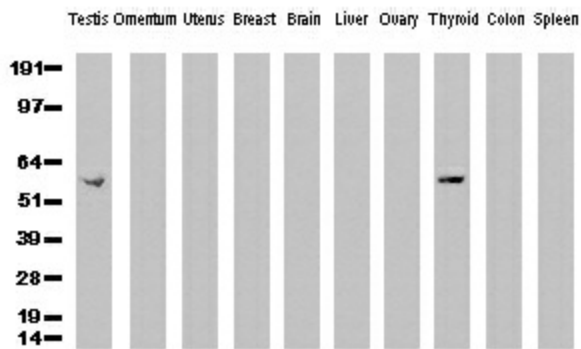
Immunohistochemical staining of paraffin-embedded mouse spleen tissue using anti-CD5 clone UMAB9 mouse monoclonal antibody. (Heat-induced epitope retrieval by 1mM EDTA in 10mM Tris buffer (pH8.5) at 120°C for 3min, UM500009) (1:300).



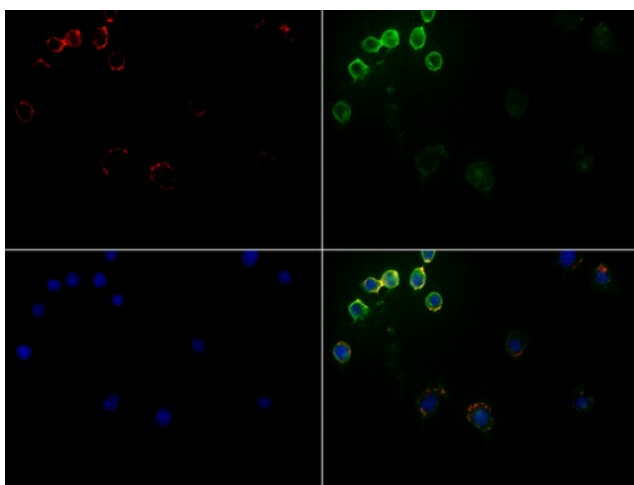
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY CD5 ([RC206494], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CD5 (1:500).



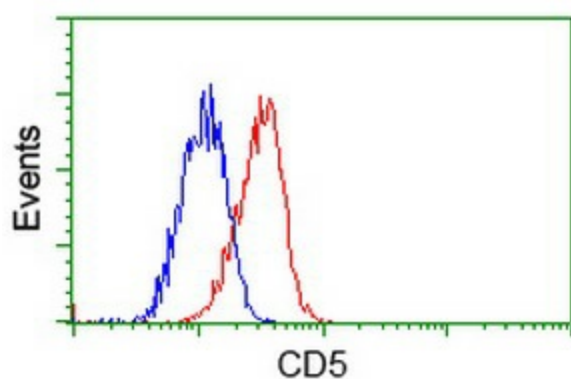
Western blot analysis of extracts (35ug) from 2 cell lines lysates by using anti-CD5 monoclonal antibody (1:500).



Western Blot analysis of 10 different human tissue lysates (10ug) by using anti-CD5 monoclonal antibody (clone UMAB9, 1:500)



Immunofluorescent staining of Jurkat cells using CD5 mouse monoclonal antibody (UM500009, green). Actin filaments were labeled with TRITC-phalloidin (red), and nuclear with DAPI (blue). The three-color overlay image is located at the bottom-right corner.



Flow cytometric Analysis of Jurkat cells, using anti-CD5 antibody (UM500009), (Red), compared to a nonspecific negative control antibody, (Blue).