

Anti-CD5 Antibody [JE25-41]

ET7110-56



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 55 kDa
Clone number:	JE25-41

Description: CD5 is a cluster of differentiation expressed on the surface of T cells (various species) and in a subset of murine B cells known as B-1a. The expression of this receptor in human B cells has been a controversial topic and up to date there is no consensus regarding the role of this receptor as a marker of human B 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 was used as a T-cell marker until monoclonal antibodies against CD3 were developed. In humans, the gene is located on the long arm of chromosome 11. There is no confirmed ligand for CD5 but there is evidence that CD72, a C-type lectin, may be a ligand or that CD5 may be homophilic, binding CD5 on the surface of other cells. CD5 includes a scavenger receptor cysteine-rich protein domain. T cells express higher levels of CD5 than B cells. CD5 is upregulated on T cells upon strong activation. In the thymus, there is a correlation with CD5 expression and strength of the interaction of the T cell towards self-peptides.

Immunogen: Synthetic peptide within Human CD5 aa 1-50 / 495.

Positive control: Human skin tissue lysates, human tonsil tissue tissue, human spleen tissue.

Subcellular location: Cell membrane.

Database links: SwissProt: P06127 Human

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Images

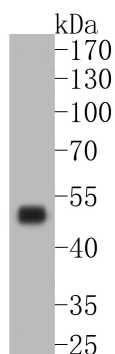


Fig1: Western blot analysis of CD5 on human skin tissue lysates with Rabbit anti-CD5 antibody (ET7110-56) at 1/500 dilution.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 55 kDa

Observed band size: 50 kDa

Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (ET7110-56) at 1/500 dilution was used in 5% NFDN/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.

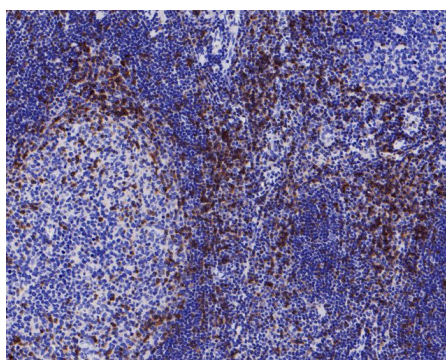


Fig2: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-CD5 antibody (ET7110-56) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (ET7110-56) at 1/200 dilution for 0.5 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX

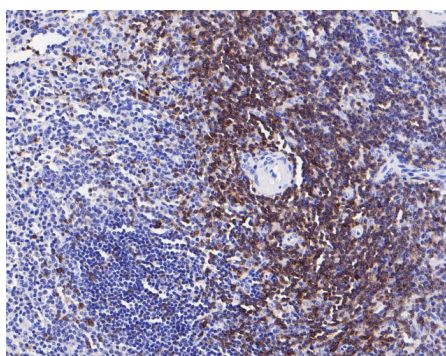


Fig3: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rabbit anti-CD5 antibody (ET7110-56) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (ET7110-56) at 1/200 dilution for 0.5 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX

Note: All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

Background References

1. Miao Y. et. al. CD5-negative Mantle Cell Lymphoma: Clinicopathologic Correlations and Outcome in 58 Patients. *Am J Surg Pathol.* 2019 Aug;43(8):1052-1060.
2. Thakral B. et. al. Prognostic impact of CD5 expression in diffuse large B-cell lymphoma in patients treated with rituximab-EPOCH. *Eur J Haematol.* 2017 Apr;98(4):415-421.

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Applications: WB=Western blot IP=Immunoprecipitation IHC=Immunohistochemistry IF=Immunofluorescence FC=Flow cytometry