Anti-CD5 Antibody [PD00-01]

HA721137

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	IHC-P
Molecular Wt:	Predicted band size: 55 kDa
Clone number:	PD00-01

Description: The CD5 antigen is a 67 kDa transmembrane glycoprotein expressed on the surface of practically all mature human T-cells (about 10% of CD4+ T-cells being CD5 negative). In immature (CD34+) T-cells, CD5 is weakly expressed, the intensity of expression increaing with maturation. CD5 is also expressed in a small subset of normal human B-cells (20% of B-cells in the peripheral blood, scattered cells in the lymph node mantle zone). The CD5+ cells are probably involved in B-T interaction and their ligand is CD72 which is expressed on all B cells. It appears that CD5+ B-cells on activation primarily produce IgM. They also produce more autoantibodies than normal CD5 negative B-cells. Thus, the CD5+ B-cell population is expanded in rheumatoid arthritis and systemic lupus erythematosus. CD5 is detected in most T-cell lymphomas and leukaemias, including 75% of peripheral T-cell lymphomas and 85% of T-ALL cases. Lack of CD5 in the latter signifies a worse prognosis. Among B-cell lymphomas, more explicit CD20+ small-cell lymphomas, small lymphocytic lymphoma and mantle cell lymphoma are CD5+, whereas follicular lymphoma, marginal zone lymphoma and lymphoplasmacytoid lymphoma are CD5 negative. CD5 is detected in 5% of acute myeloid leukaemias. CD5 has been detected in some cases of thymic carcinoma and atypical thymoma. Other carcinomas are CD5 negative. Classification of small B-cell lymphomas, prognostication of T-ALL. Identification of large cell lymphoma (CD5 negative) supervening a CD5+ small lymphocytic lymphoma. Differentiation between reactive CD5+ T-cell infiltration and CD5 negative T-cell neoplasm. Identification of thymic carcinoma. Tonsil is recommendable as positive and negative tissue control, in which dispersed B-cells in the mantle zone of the secondary follicles must display a weak to moderate and distinct membranous staining reaction. T-cells will be strongly stained. No staining must be seen in the germinal center B-cells.

Immunogen:	Synthetic peptide within Human CD5 aa 403 – 495 (intracellular).
Positive control:	Human lymph nodes tissue, human spleen tissue.
Subcellular location:	Cell membrane.
Database links:	SwissProt: P06127 Human
Recommended Dilutions:	
IHC-P	1:1,500
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

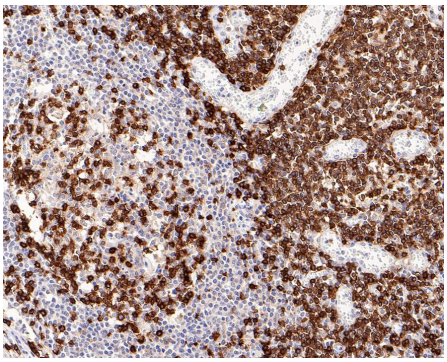

Fig1: Immunohistochemical analysis of paraffin-embedded human lymph nodes tissue with Rabbit anti-CD5 antibody (HA721137) at 1/1,500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721137) at 1/1,500 dilution for 1 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.

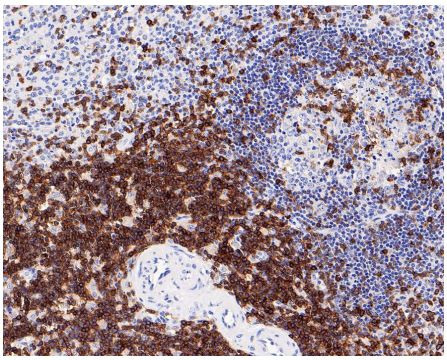

Fig2: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rabbit anti-CD5 antibody (HA721137) at 1/1,500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721137) at 1/1,500 dilution for 1 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.

Background References

1. Durani U. et. al. CD5+ diffuse large B-cell lymphoma: a narrative review. Leuk Lymphoma. 2021 Dec
2. Xu Y. et. al. De Novo CD5(+) Diffuse Large B-Cell Lymphoma: Biology, Mechanism, and Treatment Advances. Clin Lymphoma Myeloma Leuk. 2020 Oct