Anti-CD20 Antibody

IRS112MS

Product Type:	Recombinant Chimeric Antibody IgG1, primary antibodies
Species reactivity:	Human
Applications:	mIHC
Molecular Wt:	Predicted band size: 33 kDa

Description: The CD20 antigen is a membrane-embedded, non-glycosylated phosphoprotein, 33-37 kDa. CD20 functions as a Ca2+-permeable cation channel, involved in the regulation of B-cell activation, proliferation and differentiation. CD20 appears on the surface of the pre-B lymphocyte between the time of light chain rearrangement and expression of intact surface immunoglobulin and is lost just before terminal B-cell differentiation into plasma cells. CD20 is virtually specific for normal B-cells. A weak expression has been demonstrated in a subpopulation of T-cells, but not in any other cell type. CD20 is expressed in the large majority of cases of B-cell leukaemia/lymphoma. Early stage precursor B lymphoblastic leukaemia/lymphoma may be negative, and chronic lymphocytic leukaemia/small cell lymphoma may show a weak staining. Plasma cell neoplasms are as a rule CD20 negative. T-cell lymphomas are almost always negative, but CD20 has been demonstrated in few cases of various types of T-cell lymphoma. In Hodgkin lymphoma, the nodular lymphocyte-predominant subtype shows CD20 staining of L&H cells in most cases, while Reed-Sternberg cells in the other subtypes reveal CD20 positivity in about 40, albeit in a minority of neoplastic cells. Acute myeloid leukaemia is CD20 positive in few cases, while blastic transformation in chronic myeloid leukaemia is accompanied by CD20 positivity in about 30%. Thymoma may reveal CD20 positivity in a spindle cell component. In patients treated with retuximab (a humanized anti-CD20 antibody) for malignant B-cell lymphoma, the CD20 epitopes disappear (both in normal and neoplastic B-cells) as a result of down-modulation of CD20 m-RNA in the cells. This process is potentially reversible. Together with CD79a, CD20 is one of the most important markers for the identification of B-cell neoplasms as outlined above. Tonsil and appendix are appropriate controls: The mantle zone B-cells and the germinal centre B-cells must show a very strong staining reaction. No other cells should stain.

Immunogen:	Synthetic peptide within Human CD20 aa 210-297 (Cytoplasmic).
Positive control:	Human tonsil tissue.
Subcellular location:	Cell membrane.
Database links:	SwissProt: P11836 Human
Recommended Dilutions:	
mIHC	1:100
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

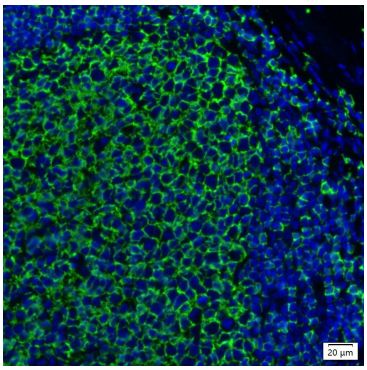

Fig1: mIHC analysis of human tonsil tissue (Formalin/PFA-fixed paraffin-embedded sections) with Mouse anti-CD20 antibody (IRS112MS) at 1/100 dilution. The immunostaining was performed with the IRISKit® HyperView mTSA Kit (MH900206). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

Background References

1. Jiang D. et. al. Pyruvate dehydrogenase kinase 4-mediated metabolic reprogramming is involved in rituximab resistance in diffuse large B-cell lymphoma by affecting the expression of MS4A1/CD20. Cancer Sci. 2021 Sep
2. Pavlasova G. et. al. The regulation and function of CD20: an "enigma" of B-cell biology and targeted therapy. Haematologica. 2020 Jun