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CD19 (B-Lymphocyte Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone CVID3/429]
Catalog # AH12655

Product Information

Application	IF, FC
Primary Accession	P15391
Other Accession	930, 652262
Reactivity	Human, Monkey, Chimpanzee
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	CVID3/429
Calculated MW	61128

Additional Information

Gene ID	930
Other Names	B-lymphocyte antigen CD19, B-lymphocyte surface antigen B4, Differentiation antigen CD19, T-cell surface antigen Leu-12, CD19, CD19
Application Note	IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD19 (B-Lymphocyte Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD19
Function	Functions as a coreceptor for the B-cell antigen receptor complex (BCR) on B-lymphocytes (PubMed:29523808). Decreases the threshold for activation of downstream signaling pathways and for triggering B-cell responses to antigens (PubMed:1373518, PubMed:16672701, PubMed:2463100). Activates signaling pathways that lead to the activation of phosphatidylinositol 3-kinase and the mobilization of intracellular Ca(2+) stores (PubMed:12387743, PubMed:16672701, PubMed:9317126, PubMed:9382888). Is not required for early steps during B cell differentiation in the blood marrow (PubMed:9317126). Required for normal differentiation of B-1 cells (By similarity). Required for normal B cell differentiation and proliferation in response to antigen challenges (PubMed:1373518, PubMed:2463100). Required for normal levels of serum immunoglobulins, and for production of

	high-affinity antibodies in response to antigen challenge (PubMed:12387743, PubMed:16672701, PubMed:9317126).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Membrane raft {ECO:0000250|UniProtKB:P25918}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P25918}
Tissue Location	Detected on marginal zone and germinal center B cells in lymph nodes (PubMed:2463100). Detected on blood B cells (at protein level) (PubMed:16672701, PubMed:2463100)

Background

CD19 is a transmembrane glycoprotein that contains two extracellular immunoglobulin-like domains. CD19 is present in both benign and malignant B-cells and is considered to be the most reliable surface marker of this lineage over a wide range of maturational stages. In normal lymphoid tissue, CD19 is observed in germinal centers, in mantle zone cells, and in scattered cells of the inter-follicular areas. Anti-CD19 exhibits an overall immunoreactivity pattern similar to those of the antibodies against CD20 and CD22. However, in contrast to CD20, expression of CD19 is continuous throughout B-cell development and through terminal differentiation of B-cells into plasma cells. Anti-CD19 positivity is seen in the vast majority of B-cell neoplasms commonly at a lower intensity than normal B-cell counterparts. Plasma cell neoplasms are nearly always negative, as are T-cell neoplasms.

References

Bregni, M. Siena, S., Formosa, A., Lappi, D.A., Martineau, D., Malavasi, F., Dorken, B., Bonadonna, G. and Gianni, A.M. 1989. B cell restricted saporin immunotoxins: activity against B cell lines and chronic lymphocytic leukemia cells. Blood 73: 753-76