10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IgM (Immunoglobulin Mu Heavy Chain) (B-Cell Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SPM188]
Catalog # AH11528

Product Information

Application	IHC, IF, FC
Primary Accession	P01871
Other Accession	3507, 510635, P20769
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	SPM188
Calculated MW	51924

Additional Information

Other Names	Ig mu chain C region, IGHM
Application Note	IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	IgM (Immunoglobulin Mu Heavy Chain) (B-Cell Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IGHM {ECO:0000303|PubMed:11340299, ECO:0000303|Ref.14}
Function	Constant region of immunoglobulin heavy chains. Immunoglobulins, also known as antibodies, are membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, the membrane-bound immunoglobulins serve as receptors which, upon binding of a specific antigen, trigger the clonal expansion and differentiation of B lymphocytes into immunoglobulins- secreting plasma cells. Secreted immunoglobulins mediate the effector phase of humoral immunity, which results in the elimination of bound antigens (PubMed:20176268, PubMed:22158414). The antigen binding site is formed by the variable domain of one heavy chain, together with that of its associated light chain. Thus, each immunoglobulin has two antigen binding sites with remarkable affinity for a particular antigen. The variable domains are assembled by a process called V-(D)-J rearrangement and can then be subjected to somatic hypermutations which, after exposure to antigen and selection, allow affinity

	maturation for a particular antigen (PubMed:17576170, PubMed:20176268).
Cellular Location	[Isoform 1]: Secreted. Note=During differentiation, B-lymphocytes switch from expression of membrane-bound IgM to secretion of IgM.

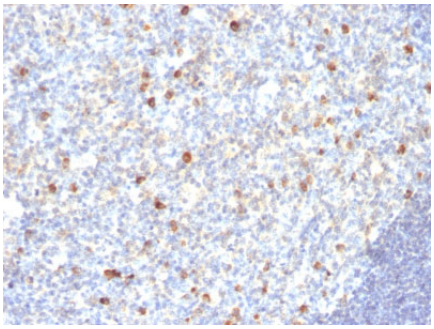
Background

Recognizes a protein of 75kDa, identified as mu heavy chain of human immunoglobulins. It does not cross-react with alpha (IgA), gamma (IgG), epsilon (IgE), or delta (IgD), heavy chains, T-cells, monocytes, granulocytes, or erythrocytes. Monomeric IgM is expressed as a membrane bound antibody on the surface of B cells and as a pentamer when secreted by plasma cells. IgM antibody is prominent in early immune responses to most antigens. Aberrant levels are associated with immune deficiency states, hereditary deficiencies, myeloma, Waldenstrom's macroglobulinemia, chronic infection and hepatocellular disease. This MAb is useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin s lymphomas. The most common feature of these malignancies is the restricted expression of a single heavy chain class. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is clonal and therefore malignant.

References

Baryshnikov AIu. Gematol Transfuziol. 1990 Aug;35(8):4-7. | Martinova T.et al., In: Problems medical biotechnology and immunological infection diseases. Vol 11, 182-186, 1996. | Baryshnikov A, and Tonevitsky A, Monoclonal antibodies in laboratory and clinic. Thesis p212, 1997. |

Images



Formalin-fixed, paraffin-embedded human Tonsil stained with IgM Monoclonal Antibody (SPM188)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.