

Human IgM Mouse mAb

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Catalog # AP94772

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P01871
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	51924
Physical State	Liquid
Immunogen	Native Human IgM
Epitope Specificity	full length
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Isoform 1: Secreted Isoform 2: Cell membrane
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	IgM normally constitutes about 10% of serum immunoglobulins. IgM antibody is prominent in early immune responses to most antigens and is largely confined to plasma due to its large size. Monomeric IgM is expressed as a membrane bound antibody on the surface of B cells and as a pentamer when secreted by plasma cells. Due to its high valency IgM is more efficient than other isotypes in binding antigens with repeating epitopes (virus particles and red blood cells) and is more efficient than IgG in activating the complement pathway. The gene for the mu constant region contains four domains separated by short intervening sequences.

Additional Information

Other Names	Immunoglobulin heavy constant mu {ECO:0000303 PubMed:11340299, ECO:0000303 Ref.14}, Ig mu chain C region, Ig mu chain C region BOT, Ig mu chain C region GAL, Ig mu chain C region OU,IGHM {ECO:0000303 PubMed:11340299, ECO:0000303 Ref.14}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:400-800,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

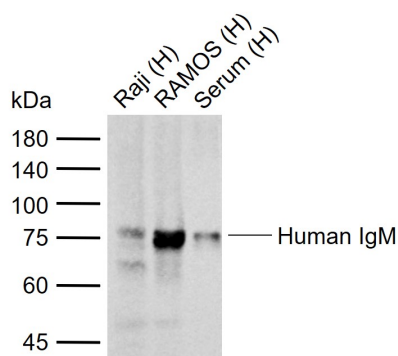
Protein Information

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

IgM normally constitutes about 10% of serum immunoglobulins. IgM antibody is prominent in early immune responses to most antigens and is largely confined to plasma due to its large size. Monomeric IgM is expressed as a membrane bound antibody on the surface of B cells and as a pentamer when secreted by plasma cells. Due to its high valency IgM is more efficient than other isotypes in binding antigens with repeating epitopes (virus particles and red blood cells) and is more efficient than IgG in activating the complement pathway. The gene for the mu constant region contains four domains separated by short intervening sequences.

Images



Sample:

Lane 1: Human Raji cell lysates

Lane 2: Human RAMOS cell lysates

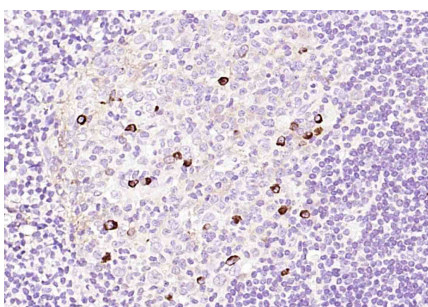
Lane 3: Human Serum cell lysates

Primary: Anti-Human IgM (AP94772) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution

Predicted band size: kDa

Observed band size: 77 kDa



Paraformaldehyde-fixed, paraffin embedded (human tonsil); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (Human IgM) Monoclonal Antibody, Unconjugated (AP94772) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Mouse)(sp-0024) instructions and DAB staining.

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