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

IgG (Immunoglobulin Gamma Heavy Chain) (B-Cell Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone B33/20]
Catalog # AH11522

Product Information

Application	IF, FC, IHC-P
Primary Accession	P01857
Other Accession	3500 (IGHG1), 3501 (IGHG2), 3502 (IGHG3), 3503 (IGHG4), 510635, P01859, P01860, P01861
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	B33/20
Calculated MW	43912

Additional Information

Other Names	Ig gamma-1 chain C region, IGHG1
Application Note	IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	IgG (Immunoglobulin Gamma 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	IGHG1 {ECO:0000303|PubMed:11340299, ECO:0000303|Ref.14}
Function	Constant region of immunoglobulin (Ig) heavy chains. Igs are membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, the membrane-bound Igs serve as receptors, which upon binding to a specific antigen trigger the clonal expansion and differentiation of B lymphocytes into Ig-secreting plasma cells. Secreted Igs known as antibodies mediate the effector phase of humoral immunity by blocking the interaction of infectious antigens with cellular receptors (via the antigen-binding region) and eliciting effector mechanisms that lead to pathogen neutralization (via the constant region) (PubMed:17576170, PubMed:20176268, PubMed:22158414). The antigen-binding region is formed by the variable domain of one heavy chain paired with the variable domain of its associated light chain. Each Ig molecule has two antigen-binding sites with remarkable affinity for a particular antigen

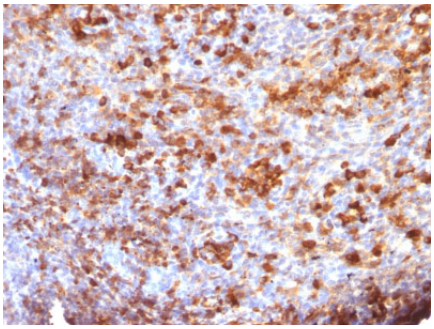
due to V-(D)-J rearrangement, somatic hypermutations and affinity maturation of the variable domains upon antigen exposure (PubMed:17576170, PubMed:20176268, PubMed:22158414). The constant region defines the Ig isotype that perform distinct sets of effector functions. B cells diversify and rearrange their Ig constant regions through class-switch recombination, a process by which the constant region is switched from one Ig isotype to another, namely from IgM and IgD to IgG, IgA and IgE (PubMed:17576170, PubMed:20176268, PubMed:22158414). The constant region of Ig gamma-1 (IgG1) isotype interacts (via the fragment crystallizable, Fc) with receptors on innate immune cells and the complement system to mediate humoral effector functions, including antibody-dependent cellular cytotoxicity or phagocytosis, complement- dependent cytotoxicity and inflammatory responses.

Cellular Location [Isoform 1]: Secreted

Background

Recognizes a protein of 75kDa, identified as γ heavy chain of human immunoglobulins. Its epitope maps in CH2 domain of Fc region of IgG. It reacts with all sub-classes of γ chain of human immunoglobulins. It does not cross-react with α (IgA), μ (IgM), ε (IgE), or δ (IgD), heavy chains, T-cells, monocytes, granulocytes, or erythrocytes. 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.

Images



Formalin-fixed, paraffin-embedded human Tonsil stained with IgG Monoclonal Antibody (B33/20)

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