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

Mouse Monoclonal Antibody [Clone IG217 + IG266 ]
Catalog # AH10501

## 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 + IgG2a, kappa |
| **Clone Names** | IG217 + IG266 |
| **Calculated MW** | 43912 |

## Additional Information

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|---|---|
| **Other Names** | Ig gamma-1 chain C region, IGHG1 |
| **Application Note** | IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A |
| **Format** | 200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml. |
| **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

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|---|---|
| **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) |

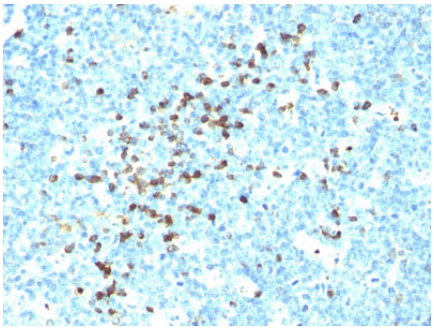
(PubMed:17576170, PubMed:20176268, PubMed:22158414). The antigen-binding region is formed by the variable domain of one heavy chain paired with the variable domain of its associated light chain. Each Ig molecule has two antigen-binding sites with remarkable affinity for a particular antigen due to V-(D)-J 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

This MAb is specific to heavy chain of IgG and shows minimal cross-reaction with heavy chains of other immunoglobulins. It is reactive with all subclasses of γ heavy chain (IgG1, IgG2a, IgG2b, IgG3). The most common feature of plasmacytomas, and certain non-Hodgkin □s lymphomas 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. Ab-3 is superb for staining of formalin-fixed tissues.

## Images



Formalin-fixed, paraffin-embedded human Tonsil stained with IgG Monoclonal Antibody (IG217 + IG266)

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