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Human IgG4 Antibody

Rabbit mAb
Catalog # AP90459

Product Information

Application	WB, IHC
Primary Accession	P01861
Reactivity	Human
Clonality	Monoclonal
Other Names	Ig gamma 4 chain C region; IGHG4; IGG4;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	43832

Additional Information

Dilution	WB 1:1000~1:2000 IHC 1:500~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human IgG4
Description	IgG4 antibodies will dominate the IgG response in schistosomiasis, lymphatic filariasis, and in patients after allergen immunotherapy. Unlike the other IgG subclasses, IgG4 does not activate complement. A combined IgA-IgG4 deficiency has been associated with recurrent pyogenic infections.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

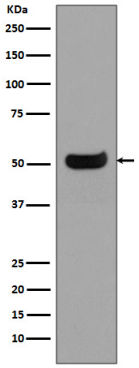
Protein Information

Name	IGHG4 {ECO:0000303|PubMed:11340299, ECO:0000303|Ref.6}
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 interacts (via the fragment crystallizable, Fc) with the Fc receptors on innate immune cells to mediate humoral effector functions. Ig gamma-4 (IgG4) isotype does not elicit antibody-dependent cellular cytotoxicity (ADDC) or complement-dependent cytotoxicity (CDC). Instead it is likely involved in immune tolerance mechanisms to allergens and parasites either by blocking IgE-antigen complex formation or by directly inhibiting mast cell degranulation through Fc receptor signaling. In the context of tumorigenesis, it may participate in immunosuppressive mechanisms.

Cellular Location [Isoform 1]: Secreted

Images



Western blot analysis of human IgG4 expression in Human spleen lysate.

Image not found : 202311/AP90459-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human stomach carcinoma, using human IgG4 Antibody .

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