www.antibodiesinc.com
orders@antibodiesinc.com
530-758-4400

PRODUCT DATASHEET

Anti-Human IgE (non-immune) Antibody

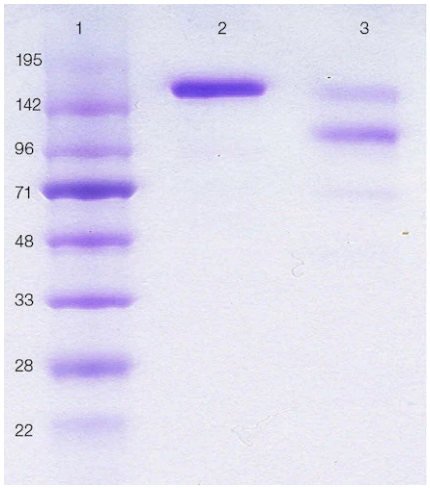
Product Details

Available Variants	100 uL (SKU:DIA HE1-010) 400 uL (SKU:DIA HE1-04) 1000 uL (SKU:DIA HE1-1)
Conjugate	Unconjugated
Isotype	IgE/k
Clone	HE1
Gene Name	IGHE
Host Species	Human
Concentration	1 mg/mL ±15%
Format	The human IgE is purified by Protein L chromatography. The remaining contaminants are mainly components from Foetal Bovine Serum
Physical State	Liquid
Buffer	0.01 M phosphate buffer, pH 7.4, containing 0.15 M NaCl.
Production Notes	Endotoxin level < 25 EU/mg
Applications	ELISA, IHC, WB
Species Reactivity	Human
Immunogen	Non-immune
Specificity	This product is purified human IgE with kappa light chains produced in vitro from a monoclonal hybridoma. Original material is obtained from a healthy donor tested negative by US-FDA approved tests against HIV, HCV and Hepatitis B.The purity of the human IgE is > 90%, tested by SDS-PAGE.As the IgE comes from a monoclonal cell line, there is no contamination of antibodies of other isotypes.
Storage	For long term storage, -18 to -22°C is recommended, but it may be stored for short term use at 2 to 8°C without exposure to light. The expiry date refers to storage at -18 to -22°C.

UniProt ID	P01854 UniProt Summary: 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). {ECO:0000303|PubMed:17576170, ECO:0000303|PubMed:20176268, ECO:0000303|PubMed:22158414}.; [Isoform 1]: Constant region of secreted IgE, also known as the Fc region of IgE antibody. Mediates IgE effector functions on myeloid and lymphoid cells primarily via two Fc receptors, the high-affinity IgE Fc receptor complex/FCER1A:MS4A2:FCGR1A and the low-affinity FCER2 receptor, which upon antigen/allergen cross-linking initiate signaling pathways that lead to immune cell activation and differentiation (PubMed:2167225, PubMed:25629393, PubMed:33840121, PubMed:7544003, PubMed:8114916, PubMed:8551243). Triggers the immediate hypersensitivity response to allergens as a host defense mechanism against helminth parasites, pathogenic bacteria and venom toxicity. When dysregulated, it can elicit harmful life-threatening allergic and anaphylactic reactions (PubMed:25629393, PubMed:33840121, PubMed:7544003, PubMed:8114916, PubMed:8551243). Stimulates the high-affinity IgE Fc receptor complex/FCER1A:MS4A2:FCGR1A on mast cells, basophils and eosinophils leading to secretion of vasoactive amines, lipid mediators and cytokines that contribute to inflammatory response, tissue remodeling and cytotoxicity against microbes (PubMed:25629393, PubMed:8114916, PubMed:8551243). On macrophages, cross-linking of FCER2 by IgE immune complexes induces intracellular killing of parasites through activation of L-Arginine-nitric oxide pathway (PubMed:7544003). Activates macrophages to kill tumor cells via antigen-specific antibody-dependent cytotoxicity (ADCC). Triggers differentiation of quiescent M0 macrophages toward M1 state and reprograms M2 macrophages toward a proinflammatory state with antitumor functions (PubMed:30956175). Stimulates FCER2 on B cells and initiates IgE-dependent antigen uptake and presentation to T cells (PubMed:2167225). {ECO:0000269|PubMed:2167225, ECO:0000269|PubMed:25629393, ECO:0000269|PubMed:30956175, ECO:0000269|PubMed:33840121, ECO:0000269|PubMed:7544003, ECO:0000269|PubMed:8114916, ECO:0000269|PubMed:8551243, ECO:0000303|PubMed:20176268, ECO:0000305|PubMed:10917520, ECO:0000305|PubMed:7995941}.; [Isoform 2]: Constant region of membrane-bound IgE (long mIgE), part of the B cell

	receptor complex (BCR). Upon antigen cross-linking triggers quick BCR signaling, ensuring survival of IgE-switched B cells and differentiation into plasma cells, thus regulating both primary and memory IgE responses. {ECO:0000269|PubMed:20458139, ECO:0000269|PubMed:8976175}.; [Isoform 3]: Constant region of membrane-bound IgE (short mIgE), part of the B cell receptor complex (BCR). Upon antigen cross-linking initiates slower but sustained BCR signaling that negatively regulates mature B cell proliferation. {ECO:0000269|PubMed:8976175}.
Country of Origin	United States
Shipping	Shipped on ice packs
Expiration	24 months from date of receipt
Usage Statement	These antibodies are to be used as research laboratory reagents and are not for use as diagnostic or therapeutic reagents in humans.

Product Images



Lane 1 shows molecular weight markers, lane 2 DIA HE1 purified human IgE 185 kDa, lane 3 shows IgE, purified from human serum from a myeloma patient.

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