IgG1 Protein, Human (D239E, L241E, HEK293)

Cat. No.:	HY-P70796A
Synonyms:	Ig gamma-1 chain C region; IGHG1
Species:	Human
Source:	HEK293
Accession:	P01857-1 (D104-K330, D239E, L241E)
Gene ID:	3500
Molecular Weight:	32-34 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. 2 μg/mL (100 μL/well) of immobilized Human IgG can bind Human CD64 with the ED50 is 30-150 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The constant region of immunoglobulin heavy chains, known as antibodies, represents membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, these membrane-bound immunoglobulins act as receptors, initiating the clonal expansion and differentiation of B lymphocytes into immunoglobulin-secreting plasma cells upon binding specific antigens. Secreted immunoglobulins play a crucial role in the effector phase of humoral immunity, leading to the elimination of bound antigens. The antigen binding site is shaped by the variable domain of one heavy chain, along with that of its associated light chain, resulting in each immunoglobulin having two antigen binding sites with remarkable affinity for a particular antigen. Variable domains undergo V-(D)-J rearrangement and subsequent somatic hypermutations, enabling affinity maturation for a specific antigen following exposure and selection. IgG1 protein mediates effector functions on monocytes, triggering antibody-dependent cellular cytotoxicity (ADCC) of virus-infected cells. Immunoglobulins are composed of two identical heavy chains and two identical light chains, interconnected by disulfide linkages, and interact with FCGR1A, FCGR2A, and FCGR3A to mediate various effector functions.

Caution: Product has not been fully validated for medical applications. For research use only.

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