ALPHA DIAGNOSTIC INTERNATIONAL

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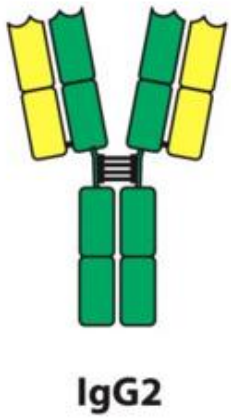
Product Data Sheet

Cat# 20102-107 Mouse IgG2c isotype control, purified **Size**: 100 ug



Immunoglobulin G (IgG) is a type of antibody. It is a protein complex composed of four peptide chains—two identical heavy chains and two identical light chains arranged in a Y-shape typical of antibody monomers. Each IgG has two antigen binding sites. Representing approximately 75% of serum antibodies in humans, IgG is the most common type of antibody found in the circulation. IgG molecules are created and released by plasma B cells.

IgG antibodies are large molecules of about 150 kDa made of four peptide chains. It contains two identical class γ heavy chains of about 50 kDa and two identical light chains of about 25 kDa, thus a tetrameric quaternary structure. The two heavy chains are linked to each other and to a light chain each by disulfide bonds. The resulting tetramer has two identical halves, which together form the Y-like shape. Each end of the fork contains an identical antigen binding site. The various regions and domains of a typical IgG are depicted in the figure to the left. The Fc regions of IgGs bear a highly conserved N-glycosylation site. The N-glycans attached to this site are predominantly core-fucosylated diantennary structures of the complex type. In addition, small amounts of these N-glycans also bear bisecting GlcNAc and α-2,6-linked sialic acid residues.

The antibody isotypes IgG and IgA are further grouped into subclasses (e.g. human IgG1, IgG2, IgG3, IgG4, IgA1 and IgA2) based on additional small differences in their amino acid heavy chain sequences.

IgG2 comprises 20-25% of the IgG subclass. It is the prevalent immune response against carbohydrate/polysaccharide antigens. Mature concentrations are typically reached around 6-7 years of age. Among all IgG isotypes, a deficiency in IgG2 is the most common and is associated with recurring airway/respiratory infections in infants.

IgG2 has a shorter hinge than IgG1, with 12 amino acid residues and four disulfide bridges. The hinge region of IgG2 lacks a glycine residue, it is relatively short and contains a rigid poly-proline double helix, stabilized by extra inter-heavy chain disulfide bridges. These properties restrict the flexibility of the IgG2 molecule.

Form and Storage

Cat# 20102-107, unlabeled

The antibody is supplied in borate buffered saline, pH 8.2 and 0.05% azide in either **lyophilized** (1 mg) or **liquid** form (1 mg//ml). Reconstitute powder in 1 ml water to prepare 1 mg/ml solution.

Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Recommended Working Dilution for ELISA

Working dilution for the specific application should be determined by the investigator to obtain the best conditions. Working solution should be prepared immediately before use and diluted solution should be discarded.

All products are for In vitro research use only.

Related Material available for ADI

Catalog#	Prod Description
20102-104	Mouse IgG3 isotype control, purified
20102-104-B	Mouse IgG3-Biotin conjugate (isotype control)
20102-104-F	Mouse IgG3-FITC conjugate (isotype control)
20102-104-FP	Mouse IgG3-FITC-PE conjugate (isotype control)
20102-104-HP	Mouse IgG3-HRP conjugate (isotype control)
20102-104-PC5	Mouse IgG3-PE-Cy5 conjugate (isotype control)
20102-104-PE	Mouse IgG3-PE conjugate (isotype control)
20102-105	Mouse IgM isotype control, purified
20102-105-B	Mouse IgM-Biotin conjugate (isotype control)
20102-105-F	Mouse IgM-FITC conjugate (isotype control)
20102-105-HP	Mouse IgM-HRP conjugate (isotype control)
20102-105-PE	Mouse IgM-PE conjugate (isotype control)
20102-106	Mouse IgE isotype control, purified
20102-107	Mouse IgG2c isotype control, purified

20102-107-Mouse-IgG2c 151112SV

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