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In vivo Grade Recombinant Chimeric Human IgG2 Isotype Control Antibody

Catalog No.: YR0353

Basic Information

Molecular Weight
150 kDa

Endotoxin
<1EU/mg (<0.001EU/μg)Determined by LAL gel clotting assay

Sterility
0.2 μm filtration

Aggregation
<5% Determined by SECP

Purity
>95% Determined by SDS-PAGE

Background

Naturally synthesized and secreted by plasma B cells, the immunoglobulin G (IgG) antibody is the most abundant antibody isotype found in blood and extracellular fluid. There are four IgG subclasses (IgG1, IgG2, IgG3, and IgG4) in humans, of which IgG1 is the most abundantnamed in serum. IgG antibodies are large molecules of about 150 kDa composed of four peptide chains, two identical heavy chains of about 50 kDa and two identical light chains of about 25 kDa. The four peptides are arranged in a Y-shape tetramer by disulfide bonds formed between the two heavy chains and between a heavy chain and a light chain.The arms of the Y, also called the Fab (fragment, antigen-binding) region containing an identical antigen binding site, is composed of one variable (located at amino terminal end, VH and VL) and one constant domain (CH1 and CL) from each heavy and light chain of the antibody. VH and VL, also called the FV region, is the most important region for binding to antigens. Three variable loops of β-strands, also called the complementarity determining regions (CDRs or idiotypes), on VH and VL respecetively are responsible for binding to the antigen.The base of the Y, also called the Fc (Fragment, crystallizable) region and composed of two heavy chains with two or three constant domains depending on the class of the antibody, binds to a specific class of Fc receptors and other immune molecules, such as complement proteins, to induce an appropriate immune response for a given antigen. The Fc region bears two highly conserved N-glycosylation sites, one on each heavy chain. 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.

Reported Applications

an isotype-matched negative control used in ELISA,Western Blot (WB), Flow Cytometry (Flow),Immunoprecipitation (IP),Immunohistochemistry (Paraffin) (IHC (P)),Immunohistochemistry (Frozen) (IHC (F)),and in vivo animal model research

Immunogen Information

Clone
4F17m

Isotype
Human IgG2 kappa

Immunogen

RecommendedIsotype Control(s)

Recommended Dilution Buffer
1×PBS pH 7.0

Contact

400-999-6126

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Product Information

Production
Purified from cell culture supernatant in an animal-free facility

Purification
Protein A or G purification

Storage
2 - 8°C for up to 4 weeks and -80°C for long term storage (Avoid repeated freezing and thawing)