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Human IgG, Pan Antibody

Purified No Carrier Protein

Monoclonal Antibody

Product Information

Product No.:	I-1203
Clone:	HP6017
Isotype:	Mouse IgG1 κ
Storage:	Sterile 2° to 8°C

Product Description

Specificity:
Clone HP6017 activity is directed against all four forms of human immunoglobulin gamma: IgG1, IgG2, IgG3 and IgG4. HP6017 cross-reacts with IgG from rabbit, goat, sheep, and horse.

Antigen Distribution:
IgG is produced by B cells and is present in mucosal secretions and serum.

Background:
Humans produce five classes of immunoglobulins, IgM, IgD, IgA, IgE, and IgG[1]. IgG is the most abundant class[1] and functions in the humoral immune response[2]. There are four subclasses of IgG, and they are numbered according to decreasing abundance as IgG1 through IgG4. The four subclasses are highly conserved and consist of four polypeptide chains: two identical heavy chains and two identical light chains[1]. While the general structure is very similar between IgG subclasses, differences in their constant regions in the hinge and upper CH2 domain as well as in glycosylation affect their binding to antigens (e.g. pathogenic proteins, polysaccharides, allergens), C1q, and Fc receptors, leading to differences in functionality. As a result, each IgG subclass has a unique response skewed to specific antigens.

IgG1 is the most abundant subclass of IgG and is primarily induced by soluble protein antigens and membrane proteins[1]. IgG2 responds to bacterial capsular polysaccharide antigens. IgG3 is a pro-inflammatory antibody that potently induces effector function. IgG4 is induced by repeated or chronic exposure to antigens that are non-infectious, such as allergens or antigens released during parasitic worm (helminth) infection.

HP6017 was generated by immunizing a BALB/c mouse with purified human immunoglobulins3. Spleen cells were fused with Sp2/0-Ag14 myeloma cells.

Known Reactivity Species:
Goat, Horse, Human, Rabbit, Sheep

Format:
Purified No Carrier Protein

Immunogen:
Purified human immunoglobulins

Formulation
This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added.

Purity
≥90% monomer by analytical SEC

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Storage and Stability
This antibody may be stored sterile as received at 2° to 8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C.

Avoid Repeated Freeze Thaw Cycles.

Product Preparation
Purified antibodies are manufactured in an animal free facility using only in vitro protein free cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Other Applications Reported in Literature:
ELISA,
IHC

Country of Origin
USA

References
1) Vidarsson G, Dekkers G, Rispens T. Front Immunol. 5:520. 2014.
2) Rispens T, Huijbers MG. Nat Rev Immunol. 23(11):763-778. 2023.
3) Reimer CB, Phillips DJ, Aloisio CH, et al. Hybridoma. 3(3):263-275. 1984.
4) Jefferis R, Reimer CB, Skvaril F, et al. Immunol Lett. 10(3-4):223-252. 1985.
5) Hamilton RG, Wilson RW, Spillman T, et al. J Immunoassay. 9(3-4):275-296. 1988.

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