

# IgG (P-17): sc-34665

## BACKGROUND

IgG is a monomeric immunoglobulin. It is the most abundant immunoglobulin and is found in the blood and extracellular fluid. There are four subclasses of IgG: IgG<sub>1</sub>, IgG<sub>2</sub>, IgG<sub>3</sub> and IgG<sub>4</sub>. IgG is composed of two heavy chains ( $\gamma$  chains) and two light ( $\kappa$  or  $\lambda$ ) chains. The chains form two domains, the Fab (antigen binding) fragment and the Fc (constant) fragment. Each IgG Fab fragment has two antigen binding sites. IgG molecules are involved in secondary immune response. They bind to several different kinds of pathogens, such as viruses, bacteria and fungi, and protect the body by complement activation (the classic pathway), opsonization for phagocytosis and neutralization of toxins. In addition, IgG is the only isotype that can pass through the placenta, thereby providing protection to the fetus in the first weeks of life, before the immune system of the fetus has developed.

## REFERENCES

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- Snydelaar Hardwicke, A.C., et al. 1988. Comparison of IgG Fab conjugates for bluetongue antibody detection by the ELISA. *Rev. Latinoam. Microbiol.* 29: 153-155.
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- Li, J., et al. 2006. Site-specific conjugation of bifunctional chelator BAT to mouse IgG<sub>1</sub> Fab' fragment. *Acta Pharmacol. Sin.* 27: 237-241.
- Mancini, N., et al. 2006. Cloning and molecular characterization of a human recombinant IgG Fab binding to the Tat protein of human immunodeficiency virus type 1 (HIV-1) derived from the repertoire of a seronegative patient. *Mol. Immunol.* 43: 1363-1369.
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## CHROMOSOMAL LOCATION

Genetic locus: IGHG1/IGHG2/IGHG3/IGHG4 (human) mapping to 14p13.

## SOURCE

IgG (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IgG<sub>3</sub> of human origin.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34665 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

IgG (P-17) is recommended for detection of all human IgG isotypes by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of IgG: 36 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

- Robinson, J.L., et al. 2011. Androgen receptor driven transcription in molecular apocrine breast cancer is mediated by FoxA1. *EMBO J.* 30: 3019-3027.
- Reijerkerk, A., et al. 2011. Brain endothelial barrier passage by monocytes is controlled by the endothelin system. *J. Neurochem.* 121: 730-737.
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- Ramasubramanyan, S., et al. 2012. Genome-wide analyses of Zta binding to the Epstein-Barr virus genome reveals interactions in both early and late lytic cycles and an epigenetic switch leading to an altered binding profile. *J. Virol.* 86: 12494-12502.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



Try **IgG (3E8): sc-69786**, our highly recommended monoclonal alternatives to IgG (P-17).