

# IgG (3E8): sc-69786

## 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 ( $\gamma$ ) 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 immune system of the fetus has developed.

## CHROMOSOMAL LOCATION

Genetic locus: IGHG3 (human) mapping to 14p13.

## SOURCE

IgG (3E8) is a mouse monoclonal antibody raised against purified IgG of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin, 1% glycerol and < 0.1% stabilizer protein.

## APPLICATIONS

IgG (3E8) is recommended for detection of IgG of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:1000), immunoprecipitation [1  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 light chain: 25 kDa.

Molecular Weight of IgG heavy chain: 50 kDa.

Positive Controls: human plasma extract: sc-364374.

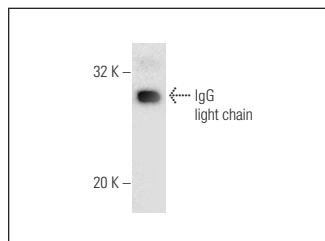
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## STORAGE

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

## DATA



IgG (3E8): sc-69786. Western blot analysis of IgG expression in human PBL whole cell lysate.

## SELECT PRODUCT CITATIONS

- Dastidar, S.G., et al. 2012. Transducin-like enhancer of Split-1 (TLE1) combines with Forkhead box protein G<sub>1</sub> (FoxG1) to promote neuronal survival. *J. Biol. Chem.* 287: 14749-14759.
- Braoudaki, M., et al. 2013. Protein biomarkers distinguish between high- and low-risk pediatric acute lymphoblastic leukemia in a tissue specific manner. *J. Hematol. Oncol.* 6: 52.
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- Xiao, T., et al. 2015. Long noncoding RNA ADINR regulates adipogenesis by transcriptionally activating C/EBP $\alpha$ . *Stem Cell Rep.* 5: 856-865.
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- Yang, F., et al. 2017. Glucocorticoid receptor: MegaTrans switching mediates the repression of an ER $\alpha$ -regulated transcriptional program. *Mol. Cell* 66: 321-331.e6.
- Sun, J., et al. 2018. Inflammatory milieu cultivated Sema3A signaling promotes chondrocyte apoptosis in knee osteoarthritis. *J. Cell. Biochem.* 119: 2891-2899.
- Su, C.M., et al. 2018. Resistin facilitates VEGF-C-associated lymphangiogenesis by inhibiting miR-186 in human chondrosarcoma cells. *Biochem. Pharmacol.* 154: 234-242.
- Hu, F., et al. 2018. Histone demethylase KDM4D promotes gastrointestinal stromal tumor progression through HIF1 $\beta$ /VEGFA signalling. *Mol. Cancer* 17: 107.

## RESEARCH USE

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