SANTA CRUZ BIOTECHNOLOGY, INC.

IgG (H-270): sc-66931

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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_1, IgG_2, IgG_3 and IgG_4. IgG is composed of two heavy chains (γ chains) and two light (κ or λ) 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

1. Marennikova, S.S., et al. 1983. Preparation and comparative evaluation of peroxidase conjugates based on pure antibodies and the IgG Fab fragment Zh. Mikrobiol. Epidemiol. Immunobiol. 9: 99-103.
2. Sterz, R., et al. 1986. Effector mechanisms in myasthenia gravis: end-plate function after passive transfer of IgG, Fab, and $F(ab')_2$ hybrid molecules. Muscle Nerve 9: 306-312.

CHROMOSOMAL LOCATION

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

SOURCE

IIgG (H-270) is a rabbit polyclonal antibody raised against amino acids 21-290 mapping at the C-terminus of IgG_3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IgG (H-270) is recommended for detection of all IgG isotypes of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 light chain: 25 kDa.

Molecular Weight of IgG heavy chain: 50 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or MDA-MB-231 cell lysate: sc-2232.

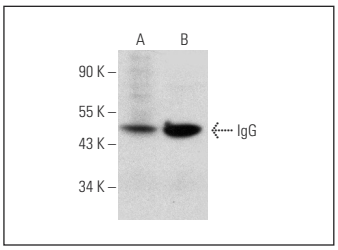
STORAGE

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

RESEARCH USE

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

DATA



IgG (H-270): sc-66931. Western blot analysis of IgG expression in HL-60 (**A**) and MDA-MB-231 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ueta, M., et al. 2004. PPARγ ligands attenuate mesangial contractile dysfunction in high glucose. Kidney Int. 65: 961-971.
2. Rizzolio, F., et al. 2012. Retinoblastoma tumor-suppressor protein phosphorylation and inactivation depend on direct interaction with Pin1. Cell Death Differ. 19: 1152-1161.
3. Freudenberg, J.M., et al. 2012. Acute depletion of Tet1-dependent 5-hydroxymethylcytosine levels impairs LIF/Stat3 signaling and results in loss of embryonic stem cell identity. Nucleic Acids Res. 40: 3364-3377.
4. Hosoki, A., et al. 2012. Mitochondria-targeted superoxide dismutase (SOD2) regulates radiation resistance and radiation stress response in HeLa cells. J. Radiat. Res. 53: 58-71.
5. Gerjevic, L.N., et al. 2012. Alcohol activates TGF-β but inhibits BMP receptor-mediated Smad signaling and Smad4 binding to hepcidin promoter in the liver. Int. J. Hepatol. 2012: 459278.
6. 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.
7. Ding, X., et al. 2013. Transcription factor AP-2α regulates acute myeloid leukemia cell proliferation by influencing Hoxa gene expression. Int. J. Biochem. Cell Biol. 45: 1647-1656.
8. Lin, X.W., et al. 2013. WW domain containing E3 ubiquitin protein ligase 1 (WWP1) negatively regulates TLR4-mediated TNF-α and IL-6 production by proteasomal degradation of TNF receptor associated factor 6 (TRAF6). PLoS ONE 8: e67633.