

IgG_{2a} (7D5): sc-69917

BACKGROUND

IgG is a monomeric immunoglobulin composed of two heavy chains and two light chains. There are four subclasses of IgG: IgG₁, IgG₂, IgG₃ and IgG₄. Each molecule has two antigen binding sites. IgG is the most abundant immunoglobulin as well as the only isotype that can pass through the placenta, thereby providing protection to the fetus in its first weeks of life before its own immune system has developed. IgG can bind to several different kinds of pathogens, for example viruses, bacteria, and fungi, and it protects the body against them by complement activation (the classic pathway), opsonization for phagocytosis, and neutralization of their toxins.

REFERENCES

- Adetugbo, K. 1978. Evolution of immunoglobulin subclasses. Primary structure of a murine myeloma γ 1 chain. *J. Biol. Chem.* 253: 6068-6075.
- Tucker, P.W., et al. 1979. Structure of the constant and 3' untranslated regions of the murine γ 2b heavy chain messenger RNA. *Science* 206: 1299-1303.
- Rabbitts, T.H., et al. 1980. The role of gene deletion in the immunoglobulin heavy chain switch. *Nature* 283: 351-356.
- Sakano, H., et al. 1980. Two types of somatic recombination are necessary for the generation of complete immunoglobulin heavy-chain genes. *Nature* 286: 676-683.
- Goldsby, R., et al. 1992. *Immunology*. New York: W.H. Freeman and Company.
- Wuhrer, M., et al. 2007. Glycosylation profiling of immunoglobulin G (IgG) subclasses from human serum. *Proteomics* 7: 4070-4081.
- Nair, N., et al. 2007. Age-dependent differences in IgG isotype and avidity induced by measles vaccine received during the first year of life. *J. Infect. Dis.* 196: 1339-1345.
- Fuchs, S., et al. 2007. Suppression of experimental autoimmune myasthenia gravis by intravenous immunoglobulin and isolation of a disease-specific IgG fraction. *Ann. N.Y. Acad. Sci.* 1110: 550-558.

CHROMOSOMAL LOCATION

Genetic locus: Ighg2a (mouse) mapping to 12 F1.

SOURCE

IgG_{2a} (7D5) is a rat monoclonal antibody raised against IgG_{2a} of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

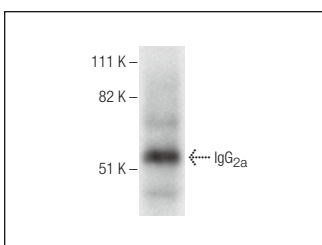
Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IgG_{2a} (7D5) is recommended for detection of IgG_{2a} of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with mouse IgG₁, IgG_{2b} or IgG₃.

Positive Controls: mouse spleen extract: sc-2391.

DATA



IgG_{2a} (7D5): sc-69917. Western blot analysis of IgG_{2a} expression in mouse spleen tissue extract.

SELECT PRODUCT CITATIONS

- Renga, B., et al. 2012. The HIV matrix protein p17 subverts nuclear receptors expression and induces a Stat1-dependent proinflammatory phenotype in monocytes. *PLoS ONE* 4: e35924.
- Chen, G.D., et al. 2016. SirT1 activator represses the transcription of TNF- α in THP-1 cells of a sepsis model via deacetylation of H4K16. *Mol. Med. Rep.* 14: 5544-5550.
- Van Beusecum, J.P., et al. 2017. Acute Toll-like receptor 4 activation impairs rat renal microvascular autoregulatory behaviour. *Acta Physiol.* 221: 204-220.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.