IgG₃ (RMG3-1): sc-53760



The Power to Question

BACKGROUND

 $\lg G$ is a monomeric immunoglobulin composed of two heavy chains and two light chains. There are four subclasses of the $\lg G$: $\lg G_1$, $\lg G_2$, $\lg G_3$ and $\lg G_4$. Each molecule has two antigen binding sites. $\lg G$ 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. $\lg G$ 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 γ1 chain. J. Biol. Chem. 253: 6068-6075.
- Rabbitts, T.H., Forster, A., Dunnick, W. and Bentley, D.L. 1980. The role
 of gene deletion in the immunoglobulin heavy chain switch. Nature 283:
 351-356.
- 3. Sakano, H., Maki, R., Kurosawa, Y., Roeder, W. and Tonegawa, S. 1980. Two types of somatic recombination are necessary for the generation of complete immunoglobulin heavy-chain genes. Nature 286: 676-683.
- Abdelmoula, M., Spertini, F., Shibata, T., Gyotoku, Y., Luzuy, S., Lambert, P.H. and Izui, S. 1989. IgG₃ is the major source of cryoglobulins in mice. J. Immunol. 143: 526-532.
- 5. Hendriks, R.W., van Tol, M.J., de Lange, G.G. and Schuurman, R.K. 1989. Inheritance of a large deletion within the human immunoglobulin heavy chain constant region gene complex and immunological implications. Scand. J. Immunol. 29: 535-541.
- Papadea, C. and Check, I.J. 1989. Human immunoglobulin G and immunoglobulin G subclasses: biochemical, genetic, and clinical aspects. Crit. Rev. Clin. Lab. Sci. 27: 27-58.
- Spiegelberg, H.L. 1989. Biological role of different antibody classes. Int. Arch. Allergy Appl. Immunol. 9022-9027.
- 8. Goldsby, R., Kindt, T. and Osborne, B. 1992. Immunology. New York: W.H. Freeman and Company.
- Wuhrer, M., Stam, J.C., van de Geijn, F.E., Koeleman, C.A., Verrips, C.T., Dolhain, R.J., Hokke, C.H. and Deelder, A.M. 2007. Glycosylation profiling of immunoglobulin G (IgG) subclasses from human serum. Proteomics 7: 4070-4081.

CHROMOSOMAL LOCATION

Genetic locus: Igh-8 (mouse) mapping to 12.

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.

SOURCE

 $\lg G_3$ (RMG3-1) is a rat monoclonal antibody raised against $\lg Gs$ and $\lg M$, $\lg E$, $\lg A$ cocktail of mouse origin.

PRODUCT

Each vial contains 200 $\mu g \ lg G_3$ in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

 lgG_3 (RMG3-1) is recommended for detection of lgG_3 of mouse origin by flow cytometry (1 μg per 1 x 10^6 cells); non cross-reactive with other isotypes.

PROTOCOLS

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

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com