# IgG<sub>2b</sub> (RMG2b-1): sc-53759



The Power to Question

## **BACKGROUND**

 $\lg G$  is a monomeric immunoglobulin composed of two heavy chains and two light chains. There are 4 subclasses of  $\lg G$ :  $\lg G_1$ ,  $\lg G_2$ ,  $\lg G_3$  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.
- 2. Tucker, P.W., Marcu, K.B., Slightom, J.L. and Blattner, F.R. 1979. Structure of the constant and 3' untranslated regions of the murine  $\gamma$  2b heavy chain messenger RNA. Science 206: 1299-1303.
- 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.
- 4. 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.
- 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.
- Nair, N., Gans, H., Lew-Yasukawa, L., Long-Wagar, A.C., Arvin, A. and Griffin, D.E. 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.
- 8. Fuchs, S., Feferman, T., Zhu, K.Y., Meidler, R., Margalit, R., Wang, N., Laub, O. and Souroujon, M.C. 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: Igh-3 (mouse) mapping to 12 F2.

### SOURCE

 $\lg G_{2b}$  (RMG2b-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  $\mu g \; lg G_{2b}$  in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

### **APPLICATIONS**

 $lgG_{2b}$  (RMG2b-1) is recommended for detection of  $lgG_{2b}$  of mouse origin by flow cytometry (1  $\mu g$  per 1 x  $10^6$  cells); non cross-reactive with other isotypes.

### **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.

### **PROTOCOLS**

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

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