

Mast cell (MCG35): sc-53365

BACKGROUND

Mast cells (or mastocytes) predominantly reside in the connective tissue in the vicinity of blood vessels that contains many histamine-rich granules and heparin, but they also localize to mucos membranes where their activity is dependent on T cells. Mast cells play important roles in the development of allergies and anaphylaxis, but they also have a protective function. They are involved in wound healing and defense against pathogens. Mast cells are coated with Immunoglobulin E, which can bind to an allergen, thereby activating the cell. When activated, a mast cell rapidly releases its characteristic granules and various hormonal mediators into the interstitium. Mast cells may also be involved in the pathology associated with certain autoimmune disorders such as rheumatoid arthritis, bullous pemphigoid, and multiple sclerosis.

REFERENCES

1. Rimmer, E.F., Turberville, C. and Horton, M.A. 1985. Human mast cells detected by monoclonal antibodies. *J. Clin. Pathol.* 37: 1249-1255.
2. Schleimer, R.P., Fox, C.C., Naclerio, R.M., Plaut, M., Creticos, P.S., Togias, A.G., Warner, J.A., Kagey-Sobotka, A. and Lichtenstein, L.M. 1985. Role of human basophils and Mast cells in the pathogenesis of allergic diseases. *J. Allergy Clin. Immunol.* 76: 369-374.
3. Rimmer, E.F. and Horton, M.A. 1987. Origin of human Mast cells studied by dual immunofluorescence. *Clin. Exp. Immunol.* 68: 712-718.
4. Buijnzeel, P.L., Gebhardt, M. and van Overveld, F.J. 1992. Mast cells and basophilic granulocytes: their significance in allergic diseases. *Schweiz. Med. Wochenschr.* 121: 1675-1685.
5. Sperr, W.R., Agis, H., Valenta, R., Bankl, H.C., Sillaber, C., Scheiner, O., Kraft, D., Lechner, K. and Valent, P. 1994. Effector cells in allergy: biological principles and new pharmacologic concepts. *Wien. Klin. Wochenschr.* 105: 677-681.
6. Costa, J.J., Weller, P.F. and Galli, S.J. 1997. The cells of the allergic response: mast cells, basophils, and eosinophils. *JAMA* 278: 1815-1822.
7. Bochner, B.S. and Schleimer, R.P. 2001. Mast cells, basophils, and eosinophils: distinct but overlapping pathways for recruitment. *Immunol. Rev.* 179: 5-15.
8. Moorchung, N., Srivastava, A.N., Gupta, N.K., Malaviya, A.K., Achyut, B.R. and Mittal, B. 2006. The role of mast cells and eosinophils in chronic gastritis. *Clin. Exp. Med.* 6: 107-114.
9. Prussin, C. and Metcalfe, D.D. 2006. 5. IgE, mast cells, basophils, and eosinophils. *J. Allergy Clin. Immunol.* 117: S450-S456.

SOURCE

Mast cell (MCG35) is a mouse monoclonal antibody raised against spleen cells and bone marrow cells of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mast cell (MCG35) is available conjugated to agarose (sc-53365 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53365 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53365 PE), fluorescein (sc-53365 FITC), Alexa Fluor® 488 (sc-53365 AF488), Alexa Fluor® 546 (sc-53365 AF546), Alexa Fluor® 594 (sc-53365 AF594) or Alexa Fluor® 647 (sc-53365 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53365 AF680) or Alexa Fluor® 790 (sc-53365 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Mast cell (MCG35) is recommended for detection of Mast cell of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

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.