

IgE (MH25-1): sc-52335

BACKGROUND

Immunoglobulins are four-chain, Y-shaped, monomeric structures comprised of two identical heavy chains and two identical light chains held together through interchain disulfide bonds. The chains form two domains, the Fab (antigen binding) fragment and the Fc (constant) fragment. Immunoglobulin ϵ (IgE) exists as a monomer. The IgE heavy chain is an ϵ chain, and the light chains are either κ - or λ -chains. IgE is significantly involved in the allergic response of the body. It binds to receptors on the surface of basophils, mast cells and activated eosinophils. One dominant functional activity of IgE is the sensitization of mast cells. IgE binds to the Fc ϵ RI receptor on the surface of mast cells, causing the cell to release chemicals that induce reactions such as sneezing and coughing. IgE also helps to protect the host against large parasites. It coats the surface of the parasite attracting eosinophils via the Fc ϵ RI receptor. The eosinophils can then attack the parasites that are too large to be ingested by phagocytes.

REFERENCES

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5. Karagiannis, S.N., Wang, Q., East, N., Burke, F., Riffard, S., Bracher, M.G., Thompson, R.G., Durham, S.R., Schwartz, L.B., Balkwill, F.R. and Gould, H.J. 2003. Activity of human monocytes in IgE antibody-dependent surveillance and killing of ovarian tumor cells. *Eur. J. Immunol.* 33: 1030-1040.
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CHROMOSOMAL LOCATION

Genetic locus: IGHE (human) mapping to 14p13.

SOURCE

IgE (MH25-1) is a mouse monoclonal antibody raised against isolated IgE of human origin.

PRODUCT

Each vial contains IgG_{2b} in 500 μ l of PBS with 0.09% sodium azide and 1% stabilizer protein.

APPLICATIONS

IgE (MH25-1) is recommended for detection of IgE of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 μ l per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

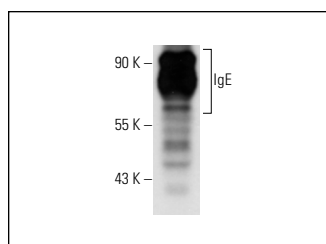
Molecular Weight of IgE classical secreted form: 75-79 kDa.

Molecular Weight of IgE glycosylated form: 78-82 kDa.

Molecular Weight of IgE membrane form: 88 kDa.

Positive Controls: U266 whole cell lysate: sc-364800.

DATA



IgE (MH25-1): sc-52335. Western blot analysis of IgE expression in U266 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Tanei, R., Hasegawa, Y. and Sawabe, M. 2013. Abundant immunoglobulin E-positive cells in skin lesions support an allergic etiology of atopic dermatitis in the elderly. *J. Eur. Acad. Dermatol. Venereol.* 27: 952-960.
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3. Tanei, R. and Hasegawa, Y. 2021. Immunohistopathological analysis of immunoglobulin E-positive epidermal dendritic cells with house dust mite antigens in naturally occurring skin lesions of adult and elderly patients with atopic dermatitis. *Dermatopathology* 8: 426-441.
4. Zhang, N., Lyu, Y., Guo, J., Liu, J., Song, Y., Fan, Z., Li, X., Li, N., Zhang, D. and Wang, H. 2022. Bidirectional transport of IgE by CD23 in the inner ear of patients with Meniere's disease. *J. Immunol.* E-published.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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