

Product Information

Anti-Human IgE-Peroxidase antibody

Mouse monoclonal

Clone GE-1, purified from hybridoma cell culture

Product Number **SAB4200755**

Product Description

Monoclonal Anti-Human IgE (mouse IgG2b isotype) is derived from the GE-1 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with purified human IgE myeloma protein. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents Product Number ISO. The antibody is purified from culture supernatant of hybridoma cells and is conjugated to horseradish peroxidase.

Monoclonal Anti-Human IgE specifically recognizes Human IgE. The antibody shows no cross-reactivity with human IgG1, IgG2, IgG3, IgG4, IgA, and IgM. The antibody is recommended to use in various immunological techniques, including ELISA.³

In comparison to other members of the family (IgA, IgD, IgG, and IgM), IgE (Immunoglobulin E) is the least abundant immunoglobulin isotype.³ IgE is produced by plasma cells and is highly functional in the lung, skin, and mucous membranes. It plays a critical role in allergic reactions and host protection from parasites.⁴⁻⁵ Normal levels of IgE in serum are less than 1 µg/mL. However, during an allergic reaction (such as atopic eczema, extrinsic asthma or hay fever, fungal and parasitic infection, atopic disease, or primary immunodeficiency) the serum IgE levels can be induced up to 5-fold.⁶⁻⁷ IgE specifically and reversibly binds to the membrane receptor FcεR type I on the surface of basophils, eosinophils, and mast cells. This binding activates the release of histamine, leukotrienes, and other mediators responsible for hypersensitivity.

Detection and measurement of total IgE concentrations is crucial for diagnosis, monitoring, and treatment of allergy patients.⁸ In addition, the recognition and isolation of allergen-specific IgE can lead to progress in understanding of pathophysiologic mechanisms underlying IgE-associated allergic disorders.⁹

Reagent

Supplied as a lyophilized powder.

Preparation Instructions

Reconstitute the content of the vial with 0.25 mL of distilled water to a final antibody concentration of 2 mg/mL. After reconstitution, the solution contains 1% BSA, 2.5% trehalose, 0.05% MIT in 0.01 M sodium phosphate buffered saline.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the lyophilized product at 2–8 °C. For extended storage after reconstitution, keep at –20 °C in working aliquots. Avoid repeated freeze-thaw cycles. For continuous use after reconstitution, keep at 2–8 °C for up to 1 month. Solutions at working dilution should be discarded if not used within 12 hours.

Product Profile

Direct ELISA: a working dilution of 1:20,000-1:30,000 is recommended using 5 µg/mL Human IgE myeloma for coating.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

1. Suutari, T.J. et al., *J. Investig. Allergol. Clin. Immunol.*, **16**, 296-302 (2006).
2. Su, X. et al., *Biosens. Bioelectron.*, **15**, 629-39 (2000).
3. Kawakami, T., and Blank, U., *J. Immunol.*, **197**, 4187-92 (2016).
4. Fitzsimmons, C.M. et al., *Int. Arch. Allergy Immunol.*, **142**, 40-50 (2007).
5. Watanabe, N. et al., *Trends Parasitol.*, **21**, 175-8 (2005).
6. Buckley, R.H., and Fiscus, S.A., *J. Clin. Invest.*, **55**, 157-65 (1975).
7. Berg, T., and Johansson, S.G.O., *Int. Arch. Allergy*, **36**, 219-32 (1969).
8. Busse, W. et al., *J. Allergy Clin. Immunol.*, **108**, 184-90 (2001).
9. Zellweger, F., and Eggel, A., *Allergy*, **71**, 1652-61 (2016).

SG,DR,OKF,LV,MAM,CY 07/21-1