Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA1), biotinylated

72-003 50 μg

Shipping and Storage: Shipped at 4℃ or -20℃ and stored at -20℃

Immunogen: Recombinant extracellular portion of human FcεR1α (corresponding to amino acids Met-26-197, where signal peptide is 1-25)

Reactivity: human, house musk shrew

Form: Biotynylated monoclonal antibody (IgG) 1.0 mg/ml (depends on Lot) in PBS- with 50% glycerol, filter-sterilized, azide free

Isotype: IgG2b

Epitope: 26-110 amino acids

Applications:

1) Western blotting (~1 μg/ml)
2) Flow Cytometry (FC) (1~5 μg/ml)
3) IHC-P, IHC-F (~1 μg/ml)
4) Titration of IgE-bound receptor in combination with CRA2 antibody (Ref.3)
5) ELISA

Background: FcεRIα is subunit of the high affinity receptor for IgE to which IgE directly binds. FcεRIα is a tetrameric complex consisting of one α, one β and two γ subunits. The latter two are required for signal transduction activity. The FcεRIα complex plays an important role in triggering allergic responses.

The CRA1 (AER37) monoclonal antibody reacts with the FcεRIα subunit on a region that does not overlap the region of the IgE binding site, thus it does not compete with IgE for the receptor binding. Since the CRA2 (AER24) monoclonal antibody reacts with the IgE binding site on FcεRIα, it competes with IgE for the receptor binding. Combining the two antibodies, one can quantitatively measure the amounts of the IgE-bound FcεRIα.

The IgG fraction was purified from serum free culture medium of mouse hybridoma (CRA1) by propriety chromatography under mild conditions. This product is a biotinylated IgG ([biotin]/[IgG] = 8.9; Lot dependent)) produced from the IgG fraction.

Data Link: UniProtKB/Swiss-Prot P12319 (FCERA_HUMAN)

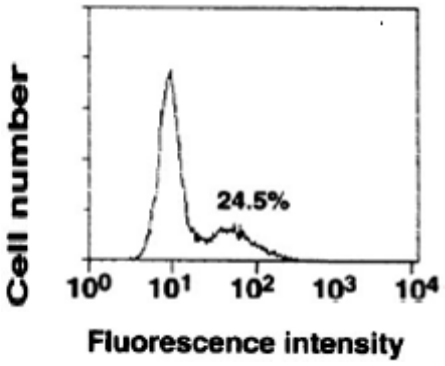

Figure: Flow-cytometry analysis with anti-FcεRIα antibody (CRA1), biotin-conjugated.
U266 cells were incubated with recombinant soluble FcεRIα and further reacted with biotin-conjugated anti-FcεRIα antibody (CRA1), followed by PE-conjugated streptavidin. The stained cells were analyzed by flow cytometry.

BioAcademia,Inc. Tel. 81-6-6877-2335 Fax. 81-6-6877-2336 info@bioacademia.co.jp http://www.bioacademia.co.jp/en/

References: This antibody has been used in the following publications.

1. Suzuki K et al. The Fc receptor (FcR) γ subunit is essential for IgE-binding activity of cell-surface expressed chimeric receptor molecules constructed from human high-affinity IgE receptor (FcεRI) αand FcRγ subunits. Mol Immunol. 1998 Apr;35(5):259-70. PMID: 9747886. **WB (human)**
2. Yanagihara Y. et al. Recombinant soluble form of the human high-affinity immunoglobulin E (IgE) receptor inhibits IgE production through its specific binding to IgE-bearing B cells. J Clin Invest. 1994 Nov; 94(5): 2162–2165. doi: 10.1172/JCI117574 PMCID: PMC294671. **FC (human)**
3. Hayashi S et al. Detection of anti-IgE and anti-FcεRI α chain auto-antibodies in patients with atopic dermatitis. Allergology International Volume 49, Issue 1, 2000, Pages 47-54. **ELISA (human)**
4. Yoshimura-Uchiyama C. et al. Comparative effects of basophil-directed growth factors Biochem Biophys Res Commun. 2003 Mar 7;302(2):201-6. PMID:12604332 **FC (human)**

Related product:

 # 72-001Anti- FcεRIα (human IgE receptor) monoclonal (CRA1)

 # 72-004 Anti- FcεRIα (human IgE receptor) monoclonal (CRA1), FITC conjugated

 # 72-005 Anti- FcεRIα (human IgE receptor) monoclonal (CRA2)

 # 72-007Anti- FcεRIα (human IgE receptor) monoclonal (CRA2), biotinylated

 # 72-008Anti- FcεRIα (human IgE receptor) monoclonal (CRA2), FITC conjugated