Anti-FcεR1α（human IgE receptor）monoclonal antibody (CRA1), FITC-conjugated

72-004　　50 ug

Storage: Ship at 4℃ and store at －20℃ (To avoid freezing, don't store below -20℃)

Reactivity: human, house musk shrew

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

Epitope: 26-110 amino acids

Product: FITC-conjugated IgG ([FITC]/[IgG] = 5.0; depending on Lot)

Applications:

1) Western blotting
2) Immunofluorescence staining (2-10 ug/ml)
3) Flow Cytometry (FC) (2-10 ug/ml)
4) IHC-P, IHC-F (2-10 ug/ml)
5) Titration of IgE-bound receptor in combination with CRA2 antibody (Ref.3)

Isotype: IgG2b

Form: 1mg/ml in PBS (pH 7.4), 50% glycerol, filter-sterilized, azide and carrier free

Purity: The IgG fraction was purified from serum free culture medium of mouse hybridoma (CRA1) by propriety chromatography under mild conditions.

Background: FcεR1α is subunit of the high affinity receptor for IgE to which IgE directly binds. FcεR1α is a tetrameric complex consisting of one α, one β and two γ subunits. The latter two are required for signal transduction activity. The FcεR1α complex plays an important role in triggering allergic responses.

The CRA1 (AER37) monoclonal antibody reacts with the FcεR1α 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 FcεR1α, it competes with IgE for the receptor binding. Combining the two antibodies, one can quantitatively measure the amounts of the IgE-bound FcεR1α.

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

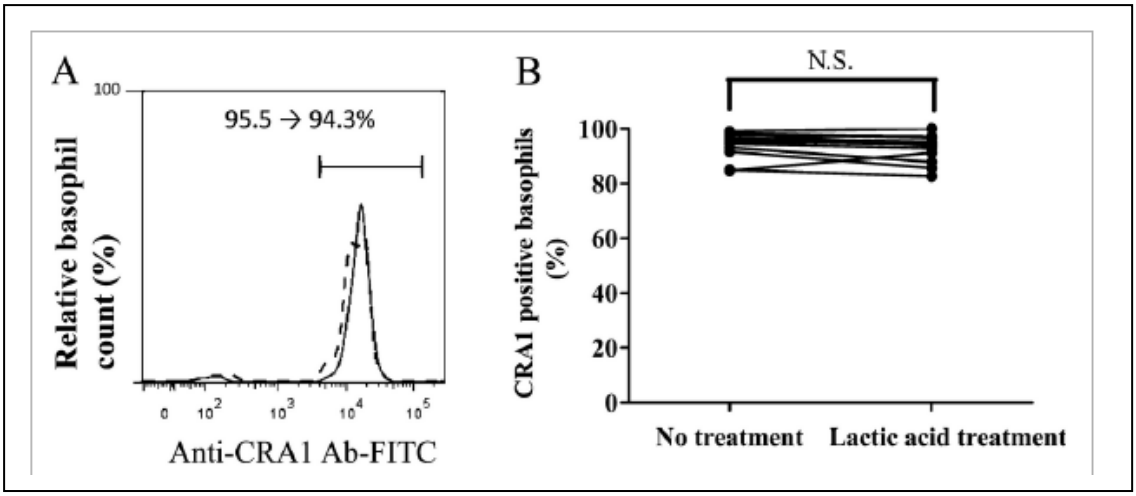

Figure. Levels of binding of CRA1 antibody measured via basophilic staining with (dashed line) or without lactic acid treatment (solid line) by flow-cytometrical analysis. The levels of CRA1, on basophils in the patient 1 (grade 3 allergy) are shown in (A and B)

(Images and data are from Iwamoto T et al Cancer Med. 2016 Jun;5(6):1004-12.)

References: This product 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. **FC (human)**
2. Wang X. et al. Optimisation and use of humanised RBL NF-AT-GFP and NF-AT-DsRed reporter cell lines suitable for high-throughput scale detection of allergic sensitisation in array format and identification of the ECM-integrin interaction as critical factor. Mol Biotechnol. 2014 Feb;56(2):136-46. PMID: 23893250 **FC (human)**
3. Iwamoto T et al. A novel approach to predict cetuximab-induced hypersensitivity reaction: detection of drug-specific IgE on basophils. Cancer Med. 2016 Jun;5(6):1004-12. PMID: 26880699 **FC (human)**

Related product:

 # 72-001Anti- FcεR1α (human IgE receptor) monoclonal (CRA1)

 # 72-003 Anti- FcεR1α (human IgE receptor) monoclonal (CRA1), biotinylated

 # 72-005 Anti-FcεR1α (human IgE receptor) monoclonal (CRA2)

 # 72-007Anti-FcεR1α (human IgE receptor) monoclonal (CRA2), biotinylated

 # 72-008Anti-FcεR1α (human IgE receptor) monoclonal (CRA2), FITC conjugated