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

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| **Product code** | 72-004 |
| **Size** | 50 μg |
| **Storage** | -20℃ |
| **Concentration** | 0.5~1.5 mg/ml |
| **Buffer** | PBS- with 50% glycerol |
| **Purity** | Purified IgG fraction with protein A from hybridoma cell culture medium. |
| **Immunogen** | Purified recombinant extracellular portion of human FcεR1α (corresponding to amino acids Met-26-197, where signal peptide is 1-25) |
| **Isotype** | Mouse IgG 2b κ |
| **Reactivity** | Human, house musk shrew |
| **Special notes** | Epitope: 26-110 amino acids<br>Conjugation: FITC ([FITC]/[IgG] = 5.0; depending on Lot) |
| **Application** | 1. Western blotting<br>2. Immunofluorescence staining (2-10 μg/ml)<br>3. Flow Cytometry (FC) (2-10 μg/ml)<br>4. IHC-P, IHC-F (2-10 μg/ml)<br>5. Titration of IgE-bound receptor in combination with CRA2 antibody (Ref.3) |
| **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.<br>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) |

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.



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**Data Images:** 72-004 Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA1) (FITC)

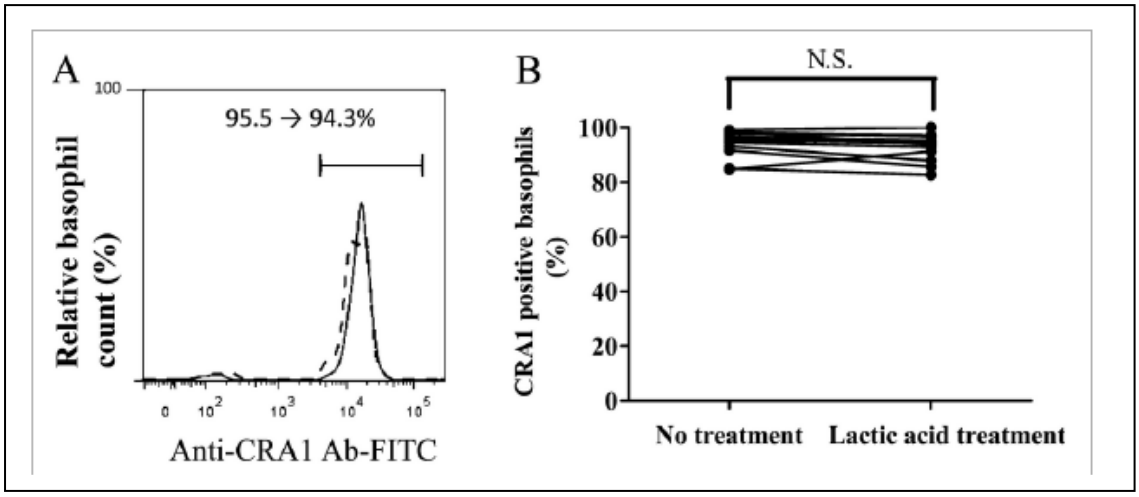



**Fig.1 Levels of binding of CRA1 antibody measured via basophilic staining with (dashed line) or without lactic acid treatment (solid line) by flow-cytometrical analysis.**

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) $\gamma$ subunit is essential for IgE-binding activity of cell-surface expressed chimeric receptor molecules constructed from human high-affinity IgE receptor (Fc$\varepsilon$RI) $\alpha$and FcR$\gamma$ 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**

72-001 Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA1)

72-003 Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA1) (biotin)

72-005 Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA2)

72-007 Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA2) (biotin)

72-008 Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA2) (FITC)



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