

## Anti-FcεR1α (human IgE receptor) antibody, mouse monoclonal (CRA2) FITC-labeled

72-008 50 μg

**Shipping and Storage:** Shipped at 4°C or -20°C and stored at -20°C

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

**Form:** 1mg/ml in PBS- with 50% glycerol, filter-sterilized, azide and carrier free

**Purity:** This product is the IgG fraction purified from serum free culture medium of mouse hybridoma (CRA2) by propriety chromatography under mild conditions.

**Isotype:** IgG1 κ

**Epitope:** Amino acids 110-197 of Fc ε R1α (Ref 3)

**Reactivity:** human

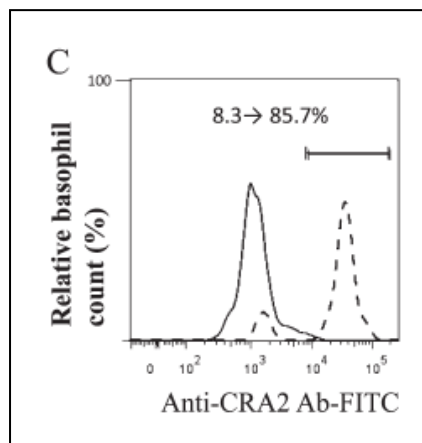
### Applications:

- 1) Western blotting (~1 μg/ml)
- 2) Flow-Cytometry
- 3) Immunohistochemistry (Paraffin and Frozen) and immunocytochemistry

**Background:** FcεR1α is subunit of the high affinity receptor for IgE to which IgE directly binds. FcεR1 is a tetrameric complex consisting of one α, one β and two γ subunits. The latter two subunits are required for signal transduction activity. The FcεR1α complex plays an important role in triggering allergic responses.

The CRA2 (AER24) monoclonal antibody reacts with the FcεR1α subunit on a region that overlaps the region of the IgE binding site, thus it competes with IgE for the receptor binding. Since the CRA1 (AER37) monoclonal antibody reacts with the site different from the IgE binding site on FcεR1α, it does not compete 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 CRA2 antibody measured via basophil staining with or without lactic acid treatment by flow cytometric analysis. Dashed and solid lines mean with and without lactic acid treatment, respectively. The levels of CRA2 on basophils in the patient 1 (grade 3 allergy) are in A.

(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 $\epsilon$ RI)  $\alpha$  and FcR $\gamma$  subunits. [Mol Immunol](#). 1998 Apr;35(5):259-70. **FC (human)**
2. 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)**
3. Perez - Witzke D. et al. CTLA4Fc $\epsilon$ , a novel soluble fusion protein that binds B7 molecules and the IgE receptors, and reduces human in vitro soluble CD23 production and lymphocyte proliferation *Immunology* 2016, 148 (1), 40-55. PMID: [26801967](#) **FC (human)**

**Related product:** #[72-001](#) Anti-Fc $\epsilon$ R1 $\alpha$  (human) monoclonal antibody (CRA1)

# [72-003](#) Anti-Fc $\epsilon$ R1 $\alpha$  (human) monoclonal antibody (CRA1), biotinylated

# [72-004](#) Anti-Fc $\epsilon$ R1 $\alpha$  (human IgE receptor) monoclonal (CRA1), FITC conjugated

# [72-005](#) Anti-Fc $\epsilon$ R1 $\alpha$  (human IgE receptor) monoclonal (CRA2)

# [72-007](#) Anti-Fc $\epsilon$ R1 $\alpha$  (human IgE receptor) monoclonal (CRA2), biotinylated