**Anti-FceR1α** (human IgE receptor) monoclonal antibody (CRA2)

72-005 100 ug

**Storage:** Ship at 4°C and store at -20°C (Do not store below -20°C)

**Reactivity:** human

**Immunogen:** Recombinant extracellular portion of human FceR1α (corresponding to amino acids Met-26-197, where signal peptide is 1-25)

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

**Applications:**
1) Western blotting (~1ug/ml) (Ref 2, 3)
2) Flow-Cytometry (Ref 1, 2)
3) Immunohistochemistry (Paraffin and Frozen) and immunocytochemistry (Ref 4)
4) Inhibition of binding of IgE with FceR1α (Ref 2)
5) Titration of IgE-bound fraction of the FceR1α using CRA1 and CRA2 antibodies (Ref 2)
6) Stimulation of serotonin release from human platelets. (Ref 1)

**Isotype:** IgG1 (κ)

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

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

**Background:** FceR1α is subunit of the high affinity receptor for IgE to which IgE directly binds. FceR1 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 FceR1α complex plays an important role in triggering allergic responses.

The CRA2 (AER24) monoclonal antibody reacts with the FceR1α 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 FceR1α, it does not compete with IgE for the receptor binding. Combining the two antibodies, one can quantitatively measure the amounts of the IgE-bound FceR1α.

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

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**Fig.1 Epitope manpping of clone CRA2 of anti-FceR1α monoclonal antibody by western blotting.**

Samples are maltose binding protein fused truncated Extra-cellular domain of FceR1α expressed in E.coli.

Fig.2 Immunohistochemical staining of skin sections from atopic dermatitis lesional skin with anti-FcεRIα antibodies.

Aceton-fixed cryostat sections were incubated with either anti-FcεRIα antibody clone CRA1 (above) or CRA2 (below) and positive reactions were visualized using the LLSAB kit (Dako, Denmark). CRA1 recognize non-IgE binding site of FcεRIα while CRA2 recognize IgE binding site. Thus CRA2 can not bind to IgE-bound FcεRIα.

Fig.3 Flow-cytometry of CHO/FcεRIα cells with CRA1 and CRA2 antibodies

CHO cells were transfected with plasmid expressing human FcεRIα. The second antibody is FITC-conjugated anti-mouse IgG2b antibody.

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


**Related product:**

- #72-001 Anti-FcεR1α (human) monoclonal antibody (CRA1)
- #72-003 Anti-FcεR1α (human) monoclonal antibody (CRA1), biotinylated
- #72-004 Anti-FcεR1α (human) monoclonal antibody (CRA1), FITC conjugated
- #72-007 Anti-FcεR1α (human) monoclonal antibody (CRA2), biotinylated
- #72-008 Anti-FcεR1α (human) monoclonal antibody (CRA2), FITC conjugated