Anti-FcεR1α（human IgE receptor）monoclonal antibody (CRA2)

72-005　　100 ug

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 FcεR1 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.

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

Applications:

1) Western blotting (～1ug/ml) (Ref 3, 4)　　2) FACS (Ref 3, 4, 5)
3) Immunohistochemistry and immunocytochemistry (Ref 6)
4) Inhibition of binding of IgE with FcεR1α. Titration of IgE-bound fraction of the FcεR1α using CRA1 and CRA2 antibodies (Ref 3)

Epitope: Amino acids 85-172 of FcεR1α (Ref 3)

Isotype: IgG1 (κ)

Form: Purified monoclonal antibody (IgG) 1mg/ml in PBS (pH 7.4), 50% glycerol, filter-sterilized,

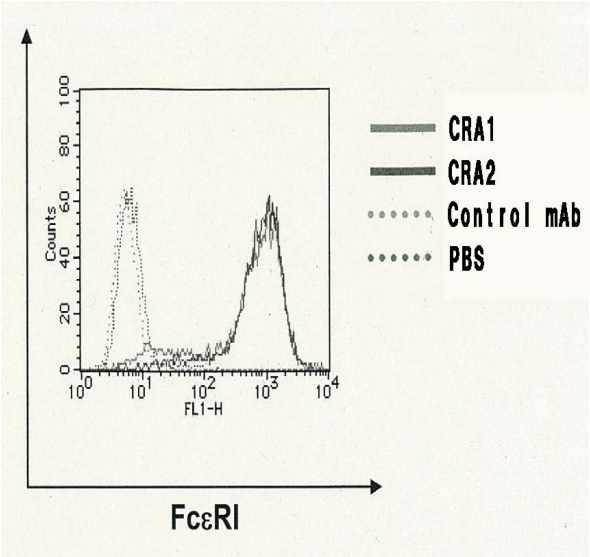
Storage: -20℃

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

References: This product was used in reference 3-6.

1. Ra C *et al* "A macrophage Fc gamma receptor and the mast cell receptor for IgE share an identical subunit" *Nature* **341**:752-754 (1989) PMID: 2529442
2. Hakimi J *et al* "The alpha subunit of the human IgE receptor (FcERI) is sufficient for high affinity IgE binding" *J Biol Chem* **265**:22079-22089 (1990) PMID: 2148316
3. Takai T *et al* "Epitope analysis and primary structures of variable regions of anti-human FcepsilonRI monoclonal antibodies, and expression of the chimeric antibodies fused with human constant regions" *Biosci Biotechnol Biochem* **64**:1856-1867(2000) PMID: 11055388
4. Takai T *et al* "Direct expression of the extracellular portion of human FcepsilonRIalpha chain as inclusion bodies in Escherichia coli " *Biosci Biotechnol Biochem* 65:79-85 (2001) PMID: 11272849
5. Hasegawa S *et al.* "Functional Expression of the High Affinity Receptor for IgE (FceRI) in Human Platelets and Its' Intracellular Expression in Human Megakaryocytes" Blood 93: 2543-2551 (1999) PMID: 10194433
6. Goto T *et al.* " Enhanced expression of the high-affinity receptor for IgE (Fc(epsilon)RI) associated with decreased numbers of Langerhans cells in the lesional epidermis of atopic dermatitis" J Dermatol Sci. 27:156-61 (2001) PMID: 11641054

Figure: FACS analysis of CHO/αβγ cells (1x10^5) with CRA1 and CRA2 antibodies by indirect-immunostaining using FITC-labeled secondary antibody.



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