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

Cat.#72-007, Size:50 ug

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 FcεR1αcomplex plays an important role in triggering allergic responses. The CRA2 (AER24) monoclonal antibody reacts with the FcεR1αsubunit 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.

Specifications:

Reactivity: human

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

Epitope: Amino acids 110-197 of FcεR1α (Ref 3)

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

Storage: Ship at 4℃ and store at -20℃ (Do not store below -20℃)

Applications:

- Western blotting (〜1ug/ml) (Ref 2, 3)
- Flow-Cytometry (Ref 1,2)
- Immunohistochemistry (Paraffin and Frozen) and immunocytochemistry (Ref 4)
- Titration of IgE-bound fraction of the FcεR1α using CRA1 and CRA2 antibodies (Ref 2)

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

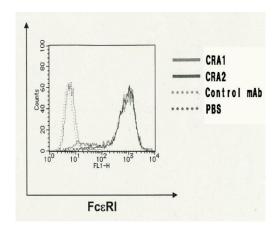**References:** This antibody (CRA2) has been used in the following publications

1. 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**
2. 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**
3. 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**

4. 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/$\alpha\beta\gamma$ cells (1×10^5) with CRA1 and CRA2 antibodies

Related products:

      #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

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

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