

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

Product code	72-005
Size	100 μg
Storage	-20°C
Concentration	1.0 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 IgG1 κ
Reactivity	Human
Special notes	Epitope: Amino acids 110-197 of FcεR1α (Ref 3)
Application	<ol style="list-style-type: none"> 1. Western blotting (~1μg/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 FcεR1α (Ref 2) 5. Titration of IgE-bound fraction of the FcεR1α using CRA1 and CRA2 antibodies (Ref 2) 6. Stimulation of serotonin release from human platelets. (Ref 1)
Background	<p>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.</p> <p>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.</p>
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.	

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

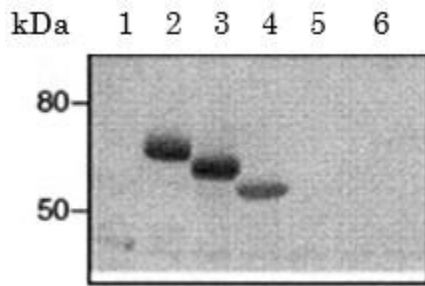


Fig.1 Epitope mapping of clone CRA2 of anti- FcεR1α monoclonal antibody by western blotting.

Samples are maltose binding protein fused truncated.

Extra-cellular domain of FcεR1α expressed in E.coli.

1.MalE-LacZ 2. 26-197 3. 68-197 4. 26-109 5. 26-153 6. 68-153

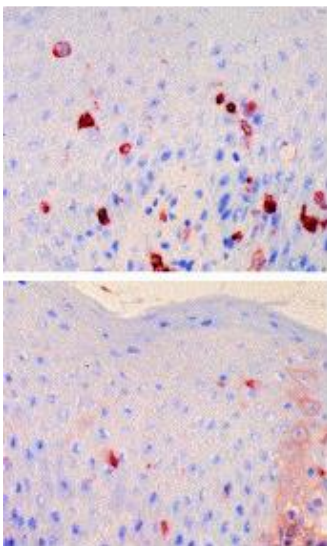


Fig.2 Immunohistochemical staining of skin sections from atopic dermatitis lesional skin with anti-FcεR1α antibodies.

Aceton-fixed cryostat sections were incubated with either anti- FcεR1α antibody clone CRA1 (above) of CRA2 (below)and positive reactions were visualized using the LLSAB kit (Dako, Denmark).

CRA1 recognize non-IgE binding site of FcεR1α while CRA2 recognize IgE binding site. Thus CRA2 can not bind to IgE-bound FcεR1α.

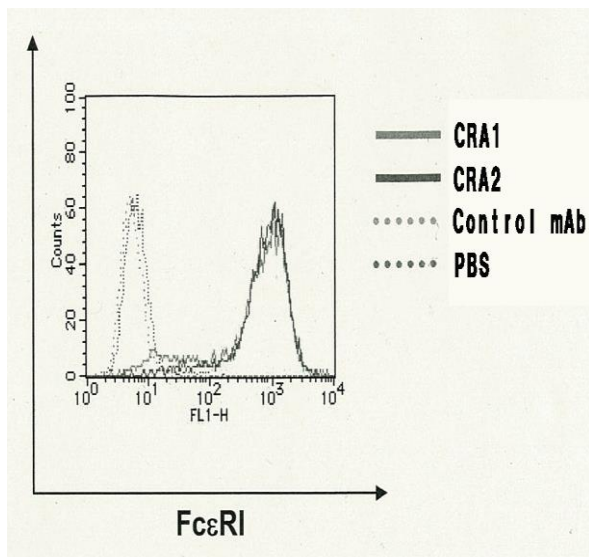


Fig.3 Flow-cytometry of CHO/Fc ϵ R1 α cells with CRA1 and CRA2 antibodies

CHO cells were transfected with plasmid expressing human Fc ϵ R1 α . The second antibody is FITC-conjugated anti-mouse IgG2b antibody.

References: Anti-Fc ϵ R1 α monoclonal 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 Fc ϵ silonRI 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 Fc ϵ silonRIalpha 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 (Fc ϵ RI) 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](#)

Related product:

- 72-001 Anti-Fc ϵ R1 α (human IgE receptor) antibody, mouse monoclonal (CRA1)
- 72-003 Anti-Fc ϵ R1 α (human IgE receptor) antibody, mouse monoclonal (CRA1) (biotin)
- 72-004 Anti-Fc ϵ R1 α (human IgE receptor) antibody, mouse monoclonal (CRA1) (FITC)
- 72-007 Anti-Fc ϵ R1 α (human IgE receptor) antibody, mouse monoclonal (CRA2) (biotin)
- 72-008 Anti-Fc ϵ R1 α (human IgE receptor) antibody, mouse monoclonal (CRA2) (FITC)