

## PE anti-human FcεRIα Antibody

<b>Catalog# / Size</b>	334609 / 25 tests 334610 / 100 tests
<b>Clone</b>	AER-37 (CRA-1)
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	FcεRIa, FcεRI-a, FcεRI-alpha, FcεRI alpha, high affinity IgE receptor
<b>Isotype</b>	Mouse IgG2b, κ
<b>Description</b>	High affinity IgE receptor (FcεRI) plays a key role in IgE-mediated allergic immune response. FcεRI is a tetrameric receptor complex, which is composed of one α-subunit (FcεRIα), one β-subunit, and two γ-subunits. FcεRIα directly binds IgE with high affinity, while the β- and γ-chains are responsible for mediating intracellular signals. FcεRIα is a 50 kD transmembrane protein with Ig superfamily structure. It is primarily found on mast cells and basophils. Further studies have indicated that FcεRIα is also expressed on many inflammatory cells including cutaneous Langerhans cells, dendritic cells, monocytes of patients with allergic disorders, platelets, bronchial epithelial cells, eosinophils produced in hypereosinophilic syndrome, and neutrophils from allergy-induced asthma patients.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Baboon, Cynomolgus, Rhesus
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 μl per million cells in 100 μl staining volume or 5 μl per 100 μl of whole blood.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Clone AER-37 (CRA-1) has been reported to bind the receptor even in the presence of IgE. <sup>4</sup>
<b>Application References</b>	<ol style="list-style-type: none"> <li>1. Yamaguchi M, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:5455.</li> <li>2. Suzukawa M, <i>et al.</i> 2005. <i>Int. Immunol.</i> 17:1249.</li> <li>3. Charles N, <i>et al.</i> 2010. <i>Nat. Med.</i> 16:701. (FC) <a href="#">PubMed</a></li> <li>4. Yamaguchi M, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:5455.</li> </ol>

### Product Citations

1. Zheng S, *et al.* 2018. *Mol Syst Biol.* 14:e8041. [PubMed](#)
2. Rittchen S, *et al.* 2021. *Int J Mol Sci.* 22: . [PubMed](#)
3. Grootens J *et al.* 2019. *EBioMedicine.* 43:150-158 . [PubMed](#)
4. Mulder K, *et al.* 2021. *Immunity.* 54(8):1883-1900.e5. [PubMed](#)
5. Sicklinger F, *et al.* 2021. *J Clin Invest.* 131: . [PubMed](#)
6. Rönnerberg E, *et al.* 2019. *Front Immunol.* 1.361805556. [PubMed](#)

7. Domanska D, *et al.* 2022. *J Exp Med.* 219:. [PubMed](#)  
8. Engeroff P, *et al.* 2020. *J Allergy Clin Immunol.* 145:301. [PubMed](#)

**RRID** AB\_1227656 (BioLegend Cat. No. 334609)  
AB\_1227655 (BioLegend Cat. No. 334610)

## Antigen Details

<b>Structure</b>	Ig superfamily, 50 kD
<b>Distribution</b>	Mast cells, basophils, cutaneous Langerhans cells, dendritic cells, and monocytes from the patients with allergic disorders, platelets, bronchial epithelial cells, eosinophils from hypereosinophilic syndrome, neutrophils from allergic asthmatic patients
<b>Function</b>	Bind IgE, trigger IgE-mediated allergic response
<b>Ligand/Receptor</b>	IgE
<b>Cell Type</b>	Basophils, Dendritic cells, Eosinophils, Langerhans cells, Mast cells, Monocytes, Neutrophils
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	Fc Receptors
<b>Antigen References</b>	1. Riske F, <i>et al.</i> 1991. <i>J. Biol. Chem.</i> 266:11245 2. Gounni AS, <i>et al.</i> 2001. <i>FASEB J.</i> 15:940. 3. Maurer D, <i>et al.</i> 1996. <i>J. Immunol.</i> 157:607 4. Maurer d, <i>et al.</i> 1994. <i>J. Exp. Med.</i> 179:745 5. Campbell AM, <i>et al.</i> 1998. <i>Am. J. Respir. Cell Mol. Biol.</i> 19:92.
<b>Gene ID</b>	<a href="#">2205</a>

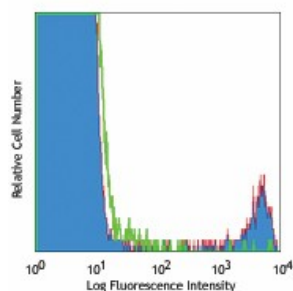
## Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

Purified anti-human FcεR1α, Biotin anti-human FcεR1α, FITC anti-human FcεR1α, PE anti-human FcεR1α, Alexa Fluor® 647 anti-human FcεR1α, PerCP anti-human FcεR1α, APC anti-human FcεR1α, Pacific Blue™ anti-human FcεR1α, PE/Cyanine7 anti-human FcεR1α, PerCP/Cyanine5.5 anti-human FcεR1α, Brilliant Violet 421™ anti-human FcεR1α, Brilliant Violet 510™ anti-human FcεR1α, Direct-Blot™ HRP anti-human FcεR1α, Brilliant Violet 605™ anti-human FcεR1α, APC/Cyanine7 anti-human FcεR1α, Alexa Fluor® 700 anti-human FcεR1α, PE/Dazzle™ 594 anti-human FcεR1α, Brilliant Violet 711™ anti-human FcεR1α, Alexa Fluor® 488 anti-human FcεR1α, TotalSeq™-A0352 anti-human FcεR1α, TotalSeq™-C0352 anti-human FcεR1α, APC/Fire™ 750 anti-human FcεR1α, Ultra-LEAF™ Purified anti-human FcεR1α, TotalSeq™-B0352 anti-human FcεR1α, TotalSeq™-D0352 anti-human FcεR1α

## Product Data



Human peripheral blood leukocytes stained with AER-37 (CRA-1) PE (gated on lymphocyte population)

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