

PRODUCT INFORMATION



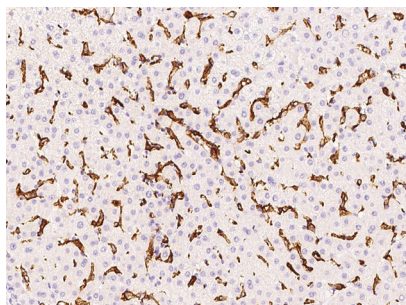
FcγRIIIa/CD16a Polyclonal Antibody

Item No. 38098

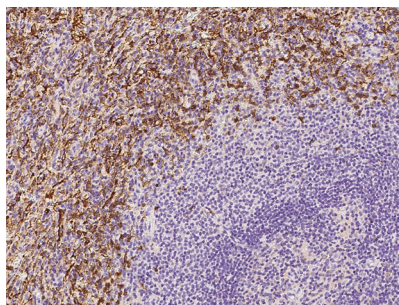
Overview and Properties

Contents:	This vial contains 50, 100, or 200 µl of protein A-affinity purified polyclonal antibody.
Synonyms:	FCG3, FCGR3A, FCR-10, FCRIIIa, FGR3A
Immunogen:	Recombinant human CD16a
Cross Reactivity:	(+) FcγRIIIa
Species Reactivity:	(+) Human, Cynomolgus monkey; other species not tested
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA and Immunohistochemistry-paraffin (IHC-P); the recommended starting dilution is 1:5,000-1:10,000 for ELISA and 1:500-1:5,000 for IHC-P. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

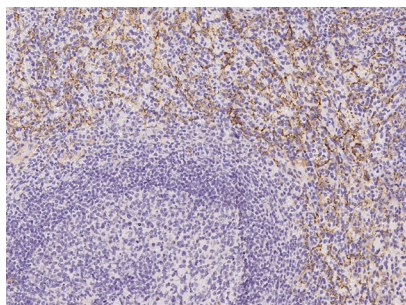
Images



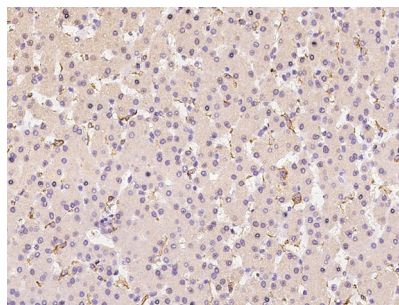
Immunohistochemical staining of formalin-fixed and paraffin-embedded human liver using FcγRIIIa/CD16a Polyclonal Antibody at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human spleen using FcγRIIIa/CD16a Polyclonal Antibody at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded cynomolgus monkey spleen using FcγRIIIa/CD16a Polyclonal Antibody at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded cynomolgus monkey liver using FcγRIIIa/CD16a Polyclonal Antibody at a dilution of 1:1,000.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Fc γ receptor IIIa (Fc γ RIIIa), also known as CD16a, is an activating receptor for IgG with roles in antibody-dependent cell cytotoxicity (ADCC).^{1,2} It is expressed primarily in natural killer (NK) cells, but also in macrophages and non-classical monocytes.^{2,3} Fc γ RIIIa is composed of an extracellular domain which contains five N-glycosylation sites, a transmembrane helix, and a cytoplasmic tail.² Upon binding of IgG, Fc γ RIIIa engages one of two signaling chains, CD3 ζ or Fc ϵ RI γ , which is phosphorylated by the Src family kinase LCK and induces intracellular signaling and neutrophil activation.¹ Fc γ RIIIa signaling is positively correlated with disease progression and pathogenic lung inflammation in patients with COVID-19.³ Mutations in *FCGR3A*, the gene encoding Fc γ RIIIa, are positively correlated with increased risk of colorectal carcinoma.⁴ Cayman's Fc γ RIIIa/CD16a Polyclonal Antibody can be used for ELISA and immunohistochemistry-paraffin (IHC-P) applications.

References

1. Coënon, L. and Villalba, M. From CD16a biology to antibody-dependent cell-mediated cytotoxicity improvement. *Front. Immunol.* **13**, 913215 (2022).
2. Patel, K.R., Benavente, M.C.R., Lorenz, W.W., *et al.* Fc γ receptor IIIa/CD16a processing correlates with the expression of glycan-related genes in human natural killer cells. *J. Biol. Chem.* **296**, 100183 (2021).
3. Gonzalez, J.C., Chakraborty, S., Thulin, N.K., *et al.* Heterogeneity in IgG-CD16 signaling in infectious disease outcomes. *Immunol. Rev.* **309**(1), 64-74 (2022).
4. Canossi, A., Aureli, A., Del Beato, T., *et al.* Role of KIR and CD16A genotypes in colorectal carcinoma genetic risk and clinical stage. *J. Transl. Med.* **14**(1), 239 (2016).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
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[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM