

PRODUCT INFORMATION



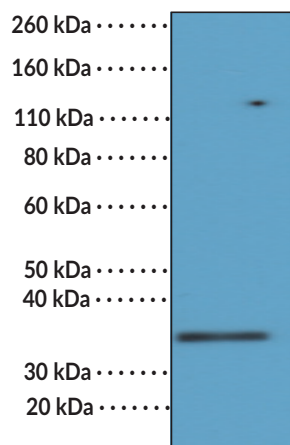
CD8a (C-Term) Rabbit Monoclonal Antibody (RM397)

Item No. 32319

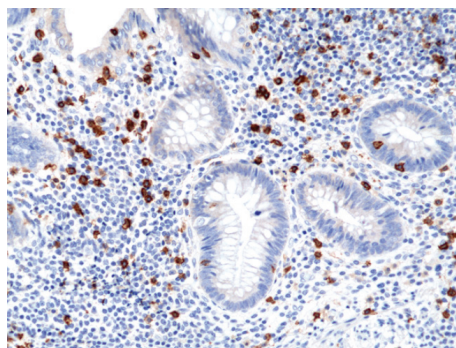
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	T Cell Surface Glycoprotein CD8 α-chain, T Cell Surface Glycoprotein CD8 Alpha Chain
Immunogen:	Peptide from the C-terminal region of human CD8
Cross Reactivity:	(+) CD8a
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM397
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC and WB is 1:100-1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of human T cells using CD8a (C-Term) Rabbit Monoclonal Antibody (RM397) at a 1:100 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human appendix tissue using CD8a (C-Term) Rabbit Monoclonal Antibody (RM397) at a 1:100 dilution.

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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Description

The CD8 α -chain (CD8a) is a transmembrane glycoprotein that exists as a homodimer, CD8 $\alpha\alpha$, or heterodimer with the CD8 β -chain (CD8b), CD8 $\alpha\beta$, to form the T cell receptor (TCR) co-receptor CD8.^{1,2} CD8a is composed of an extracellular immunoglobulin variable-like (IgV) domain, which interacts with MHC class I molecules, a transmembrane domain, and a cytoplasmic tail that associates with the tyrosine kinase p56^{lck} and mediates signal transduction.¹⁻³ CD8 $\alpha\beta$ is expressed by cytotoxic T lymphocytes (CTLs), where it acts as a TCR co-receptor by enhancing T cell signaling and activation upon binding to antigen-displaying MHC class I molecules.^{2,4} CD8 $\alpha\alpha$ is expressed by CTLs and intestinal epithelial lymphocytes, as well as $\gamma\delta$ T, natural killer (NK), and dendritic cells, where it acts as a positive or negative regulator of cell activation in a cell-dependent manner. *Cd8a*^{-/-} mice infected with *M. tuberculosis* exhibit reduced survival.⁵ Cayman's CD8a (C-Term) Rabbit Monoclonal Antibody (RM397) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Laugel, B., Cole, D.K., Clement, M., *et al.* The multiple roles of the CD8 coreceptor in T cell biology: Opportunities for the selective modulation of self-reactive cytotoxic T cells. *J. Leukoc. Biol.* **90(6)**, 1089-1099 (2011).
2. Cheroutre, H. and Lambolez, F. Doubting the TCR coreceptor function of CD8 $\alpha\alpha$. *Immunity* **28(2)**, 149-159 (2008).
3. Irie, H.Y., Ravichandran, K.S., and Burakoff, S.J. CD8 β chain influences CD8a chain-associated Lck kinase activity. *J. Exp. Med.* **181(4)**, 1267-1273 (1995).
4. Geng, J. and Raghavan, M. CD8 $\alpha\alpha$ homodimers function as a coreceptor for KIR3DL1. *Proc. Nat. Acad. Sci. U.S.A.* **115(36)**, 17951-17956 (2019).
5. Sousa, A.O., Mazzaccaro, R.J., Russell, R.G., *et al.* Relative contributions of distinct MHC class I-dependent cell populations in protection to tuberculosis infection in mice. *Proc. Nat. Acad. Sci. U.S.A.* **97(8)**, 4204-4208 (2000).

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