

PRODUCT INFORMATION



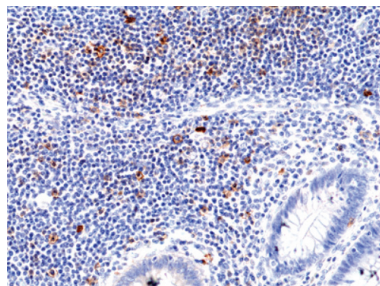
ICOS/CD278 (C-Term) Rabbit Monoclonal Antibody (RM417)

Item No. 32338

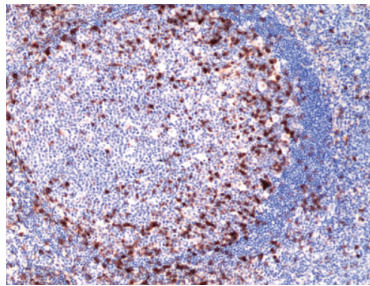
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Activation-inducible Lymphocyte Immunomediatory Molecule, Inducible T cell Co-Stimulator
Immunogen:	Peptide from the C-terminal region of human ICOS
Cross Reactivity:	(+) ICOS
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:	RM417
Host:	Rabbit
Isotype:	IgG
Application:	Immunohistochemistry (IHC); the recommended starting dilution 1:100-1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Immunohistochemical staining of formalin-fixed and paraffin-embedded human appendix tissue using ICOS/CD278 (C-Term) Rabbit Monoclonal Antibody (RM417) at a dilution of 1:100.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human tonsil tissue using ICOS/CD278 (C-Term) Rabbit Monoclonal Antibody (RM417) at a dilution of 1:100.

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

Inducible T cell co-stimulator (ICOS), also known as CD278, is a glycoprotein and member of the CD28/B7 family of co-stimulatory receptors that promotes T cell activation.¹ It exists as a membrane-bound disulfide-linked homodimer and contains a leader peptide, an extracellular domain that interacts with ICOS ligand (ICOSL), and a cytoplasmic tail that mediates association with PI3K and is critical for T cell activation.^{1,2} ICOS is expressed on activated CD4⁺ and CD8⁺ T cells following T cell receptor crosslinking and/or co-stimulation by CD28.¹ ICOS co-stimulation of T cells induces production of IL-4, IL-5, IL-6, IFN- γ (Item Nos. 32008 | 32078), TNF- α (Item Nos. 32020 | 32069), and GM-CSF (Item Nos. 32044 | 32079), but not IL-2, and superinduces production of IL-10, as well as prevents T cell apoptosis.² Human melanoma cells express ICOSL and promote the expansion of ICOS⁺ IL-10-secreting regulatory T cells, which is positively correlated with unfavorable clinical outcomes.⁴ Administration of an anti-ICOS monoclonal antibody ameliorates mucosal inflammation and damage in a mouse model of T helper cell-induced chronic colitis.³ Cayman's ICOS/CD278 (C-Term) Rabbit Monoclonal Antibody (RM417) can be used for immunohistochemistry (IHC) applications.

References

1. Wikenheiser, D.J. and Stumhofer, J.S. ICOS Co-Stimulation: Friend or Foe? *Front. Immunol.* **7**, 304 (2016).
2. Beier, K.C., Hutloff, A., Dittrich, A.M., *et al.* Induction, binding specificity and function of human ICOS. *Eur. J. Immunol.* **30**(12), 3707-3717 (2000).
3. Kanai, T., Totsuka, T., Tezuka, K., *et al.* ICOS costimulation in inflammatory bowel disease. *J. Gastroenterol.* **37**(Suppl 14), 78-81 (2002).
4. Amatore, F., Gorvel, L., and Olive, D. Inducible co-stimulator (ICOS) as a potential therapeutic target for anti-cancer therapy. *Expert Opin. Ther. Targets* **22**(4), 343-351 (2018).

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