

PRODUCT INFORMATION

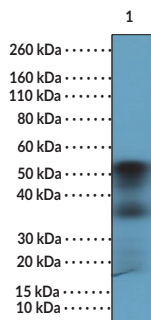
TNFRSF7/CD27 Rabbit Monoclonal Antibody (Clone RM501)

Item No. 42853

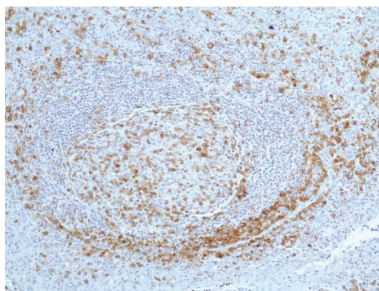
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified recombinant monoclonal antibody
Synonyms:	TNFRSF7, Tp55 Tumor Necrosis Factor Receptor Superfamily Receptor 7
Immunogen:	A peptide corresponding to residues near the C-terminus of human CD27
Cross Reactivity:	(+) CD27
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:	RM501
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of Raji cell lysate using TNFRSF7/CD27 Rabbit Monoclonal Antibody (Clone RM501) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human tonsil tissue sections using Cayman's TNFRSF7/CD27 Rabbit Monoclonal Antibody (Clone RM501) 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.

Copyright Cayman Chemical Company, 03/12/2025

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

PRODUCT INFORMATION



Description

CD27, also known as tumor necrosis factor receptor superfamily receptor 7 (TNFRSF7), is a type I transmembrane glycoprotein with roles in T cell-mediated immunity.^{1,2} It is composed of an extracellular domain containing three cysteine-rich domains (CRDs), a transmembrane domain, and a short cytoplasmic domain that facilitates intracellular signaling.¹ CD27 is expressed on a broad range of lymphocytes, including natural killer (NK), B, and T cells, with T cell CD27 expression increasing upon T cell receptor stimulation.³ Binding of homotrimeric CD70 to CD27 on antigen-primed T cells induces NF- κ B and MAPK signaling through TNF receptor-associated factors (TRAFs) and, when the T cell is stimulated by other factors, induces PI3K signaling to induce the co-stimulation and expansion of naïve CD4⁺ and CD8⁺ T cells.^{4,5} Knockout of CD27 reduces thymic development of regulatory T cell (Treg) precursors and enhances apoptosis of mature Tregs in mice. Levels of CD27-expressing plasma cells are increased in the periphery and positively correlate with the disease activity index and serum levels of anti-dsDNA autoantibodies in patients with systemic lupus erythematosus (SLE).⁶ Cayman's TNFRSF7/CD27 Rabbit Monoclonal Antibody (Clone RM501) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Buchan, S.L., Rogel, A., and Al-Shamkhani, A. The immunobiology of CD27 and OX40 and their potential as targets for cancer immunotherapy. *Blood* **131**(1), 39-48 (2018).
2. Grant, E.J., Nüssing, S., Sant, S., *et al.* The role of CD27 in anti-viral T-cell immunity. *Curr. Opin. Virol.* **22**, 77-88 (2017).
3. Hendriks, J., Gravestien, L.A., Tesselaar, K., *et al.* CD27 is required for generation and long-term maintenance of T cell immunity. *Nat. Immunol.* **1**(5), 433-440 (2000).
4. Wyzgol, A., Müller, N., Fick, A., *et al.* Trimer stabilization, oligomerization, and antibody-mediated cell surface immobilization improve the activity of soluble trimers of CD27L, CD40L, 41BBL, and glucocorticoid-induced TNF receptor ligand. *J. Immunol.* **183**(3), 1851-1861 (2009).
5. Wajant, H. Therapeutic targeting of CD70 and CD27. *Expert Opin. Ther. Targets* **20**(8), 959-973 (2016).
6. Han, B.K., Olsen, N.J., and Bottaro, A. The CD27-CD70 pathway and pathogenesis of autoimmune disease. *Semin. Arthritis Rheum.* **45**(4), 496-501 (2016).

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