

# PRODUCT INFORMATION



## CD63 Rabbit Monoclonal Antibody (Clone 142)

Item No. 38078

### Overview and Properties

<b>Contents:</b>	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody.
<b>Synonyms:</b>	CD208, Granulophysin, LAMP3, LIMP1, Lysosomal-Associated Membrane Protein 3, Lysosome Integral Membrane Protein 1, Melanoma-Associated Antigen ME491, Platelet Glycoprotein 40, Pltgp40, Tetraspanin-30, Tspan-30
<b>Immunogen:</b>	Recombinant human CD63
<b>Cross Reactivity:</b>	(+) CD63
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	0.2 µm filtered solution in PBS
<b>Clone:</b>	142
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	ELISA; the recommended starting dilution is 1:5,000-1:10,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Description

CD63 is a cell surface transmembrane glycoprotein and member of the tetraspanin family.<sup>1,2</sup> It is composed of an intracellular N-terminal domain, a small extracellular loop, a small intracellular loop, and a large extracellular loop in between four transmembrane domains, and an intracellular C-terminal tail that contains a YXXX tyrosine-based motif, which is required for targeting of CD63 to the lysosome. CD63 is ubiquitously expressed and localizes to the plasma membrane and late endosomes, lysosomes, MHC class II compartments, and multivesicular bodies (MVBs) following clathrin-dependent endocytosis.<sup>2</sup> It is involved in cell adhesion, inflammation, platelet activation, angiogenesis, and virus entry, acts as a functional receptor for tissue inhibitor of metalloproteinases 1 (TIMP-1), and associates with various integrins.<sup>1,3,4</sup> Knockdown of CD63 prevents infection of human papillomavirus (HPV) and HIV-1, and antibodies targeting CD63 reduce infection of severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) *in vitro*.<sup>3</sup> Protein levels of CD63 are increased in patients with esophageal carcinoma and negatively correlate with tumor stage and lymph node metastasis.<sup>5</sup> Cayman's CD63 Rabbit Monoclonal Antibody (Clone 142) can be used for ELISA.

### References

1. Justo, B.L. and Jasiulionis, M.G. Characteristics of TIMP1, CD63, and  $\beta$ 1-integrin and the functional impact of their interaction in cancer. *Int. J. Mol. Sci.* **22(17)**, 9319 (2021).
2. Pols, M.S. and Klumperman, J. Trafficking and function of the tetraspanin CD63. *Exp. Cell Res.* **315(9)**, 1584-1592 (2009).
3. New, C., Lee, Z.-Y., Tan, K.S., *et al.* Tetraspanins: Host factors in viral infections. *Int. J. Mol. Sci.* **22(21)**, 11609 (2021).
4. Maecker, H.T., Todd, S.C., and Levy, S. The tetraspanin superfamily: Molecular facilitators. *FASEB J.* **11(6)**, 428-442 (1997).
5. Lai, X.P., Gu, Q., Zhou, X., *et al.* Decreased expression of CD63 tetraspanin protein predicts elevated malignant potential in human esophageal cancer. *Oncol. Lett.* **13(6)**, 4245-4251 (2017).

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.

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