

PRODUCT INFORMATION



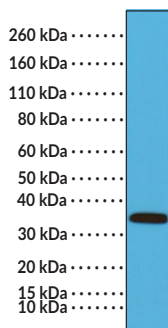
Calponin-1 (C-Term) Rabbit Monoclonal Antibody (Clone RM262)

Item No. 32207

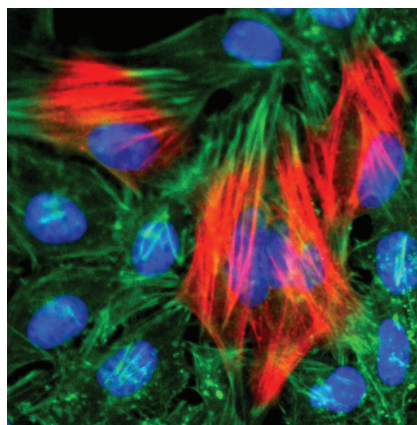
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonym:	CaP
Immunogen:	Peptide from the C-terminal region of human calponin-1
Cross Reactivity:	(+) Calponin-1
Species Reactivity:	(+) Human, mouse
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM262
Host:	Rabbit
Isotype:	IgG
Applications:	Immunocytochemistry (ICC) and Western blot (WB); the recommended starting dilution for ICC is 1:100-1:200 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 mouse heart tissue lysates. Mouse heart tissue lysates were subjected to WB using Calponin-1 (C-Term) Rabbit Monoclonal Antibody (Clone RM262), which showed calponin-1 expression in mouse heart tissue.



Immunocytochemistry of HeLa cells using Calponin-1 (C-Term) Rabbit Monoclonal Antibody (Clone RM262) (red). Actin filaments have been labeled with fluorescein phalloidin (green) and the nucleus stained with DAPI (blue).

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

Calponin-1 is an actin binding protein and a component of smooth muscle cell (SMC) contractile machinery that is encoded by *CNN1* in humans.^{1,2} It is a thin filament-associated protein expressed exclusively in SMCs that interacts with actin to inhibit the movement of actin and myosin, as well as the actin-activated MgATPase activity of phosphorylated myosin.³ High levels and low levels of calponin-1 are associated with low and high disease progression risk, respectively, in patients with ductal carcinoma *in situ* (DCIS).⁴ Downregulation of arterial *Cnn1* expression promotes proliferation of vascular SMCs (VSMCs) in DOCA-salt hypertensive rats and a pig model of hypertension induced by aortic coarctation.² Cayman's Calponin-1 (C-Term) Rabbit Monoclonal Antibody (Clone RM262) can be used for immunocytochemistry (ICC) and Western blot (WB) applications.

References

1. Winder, S.J. and Walsh, M.P. Calponin: Thin filament-linked regulation of smooth muscle contraction. *Cell Signal*. **5(6)**, 677-686 (1993).
2. Belo, V.A., Parente, J.M., Tanus-Santos, J.E., *et al.* Matrix metalloproteinase (MMP)-2 decreases calponin-1 levels and contributes to arterial remodeling in early hypertension. *Biochem. Pharmacol.* **118**, 50-58 (2016).
3. Tang, D.-C., Kang, H.-M., Jin, J.-P., *et al.* Structure-function relations of smooth muscle calponin. The critical role of serine 175. *J. Biol. Chem.* **271(15)**, 8605-8611 (1996).
4. Mitchell, E., Jindal, S., Chan, T., *et al.* Loss of myoepithelial calponin-1 characterizes high-risk ductal carcinoma in situ cases, which are further stratified by T cell composition. *Mol. Carcinog.* **59(7)**, 701-712 (2020).

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