

PRODUCT INFORMATION

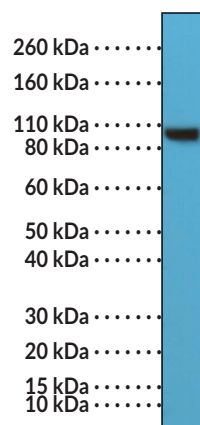


α -Actinin-4 (N-Term) Rabbit Monoclonal Antibody (Clone RM287) Item No. 32239

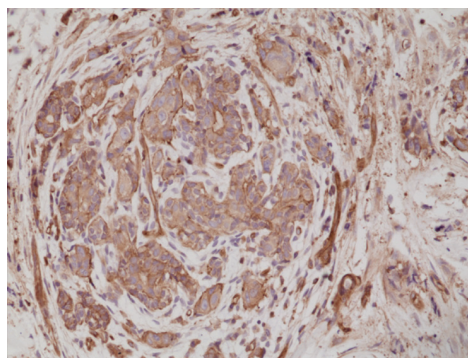
Overview and Properties

Contents:	This vial contains 100 μ l of protein A-affinity purified monoclonal antibody.
Synonyms:	ACTN4, Focal Segmental Glomerulosclerosis 1, FSGS1
Immunogen:	Peptide from the N-terminal region of human ACTN4
Cross Reactivity:	(+) ACTN4
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	\geq 1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM287
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 HeLa cell lysates using α -Actinin-4 (N-Term) Rabbit Monoclonal Antibody (Clone RM287) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human breast cancer tissue using α -Actinin-4 (N-Term) Rabbit Monoclonal Antibody (Clone RM287) at a 1:200 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

α -Actinin-4 (ACTN4) is a filamentous actin-crosslinking protein and member of the α -actinin protein family with roles in the regulation of cytoskeletal integrity and cell movement, as well as gene transcription.^{1,2} It is composed of an N-terminal actin-binding region with two calponin-homology repeats, a rod domain containing four spectrin-like repeats that is essential for anti-parallel dimerization, and a C-terminal calmodulin-like domain.¹ ACTN4 is ubiquitously expressed in non-muscle cells and primarily localized to the cytoplasm where it participates in cytoskeletal organization.² However, ACTN4 can be translocated to the nucleus and induce transcription *via* interaction with nuclear receptors, including estrogen receptor α , retinoic acid receptors (RARs), and the vitamin D receptor, and acts as a transcriptional co-activator of NF- κ B. Mutation of ACTN4 induces podocyte injury caused by cytoskeletal dysregulation and proteotoxicity and has been seen in patients with hereditary focal segmental glomerulosclerosis.³ ACTN4 is overexpressed and associated with tumor metastasis in various cancers.² Cayman's α -Actinin-4 (N-Term) Rabbit Monoclonal Antibody (Clone RM287) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Zhang, Y.Y., Tabataba, H., Liu, X.Y., *et al.* ACTN4 regulates the stability of RIPK1 in melanoma. *Oncogene* **37(29)**, 4033-4045 (2018).
2. Jung, J., Kim, S., An, H.-T., *et al.* α -Actinin-4 regulates cancer stem cell properties and chemoresistance in cervical cancer. *Carcinogenesis* **41(7)**, 940-949 (2020).
3. Yee, A., Papillon, J., Guillemette, J., *et al.* Proteostasis as a therapeutic target in glomerular injury associated with mutant α -actinin-4. *Am. J. Physiol. Renal Physiol.* **315(4)**, F954-F966 (2018).

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