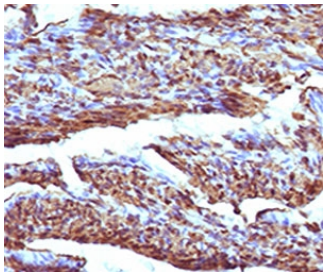
Calponin Antibody Rabbit Monoclonal [clone RMCN1-1] (V7217)

Catalog No.	Formulation	Size
V7217-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7217-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7217SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7217IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

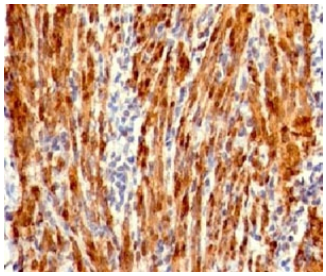
Recombinant RABBIT MONOCLONAL

Bulk quote request

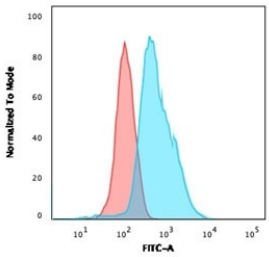
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	RMCN1-1
Purity	Protein A affinity chromatography
UniProt	P51911
Localization	Cytoplasmic
Applications	Flow cytometry: 1-2ug/10^6 cells Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Prediluted IHC only format: incubate for 30 min at RT (1)
Limitations	This Calponin antibody is available for research use only.



Immunohistochemistry of Calponin Antibody in human uterus. Formalin-fixed, paraffin-embedded human uterine tissue was stained using the rabbit monoclonal Calponin antibody (clone RMCN1-1), demonstrating strong cytoplasmic staining of smooth muscle cells within the myometrium, consistent with Calponin 1 expression in contractile smooth muscle fibers, while surrounding stromal and epithelial components show minimal staining. Heat-induced epitope retrieval was performed by steaming sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 minutes prior to testing.



IHC testing of formalin-fixed, paraffin-embedded human uterus stained with Calponin antibody (clone RMCN1-1). HIER: steam sections in 10mM Tris with 1mM EDTA, pH 9.0, for 10-20 min.



Flow cytometry testing of PFA-fixed human K562 cells with Calponin antibody (clone RMCN1-1); Red=isotype control, Blue= Calponin antibody.

Description

Calponin antibody recognizes Calponin 1, an actin-binding protein encoded by the CNN1 gene and a widely used marker of smooth muscle and myoepithelial differentiation. Calponin Antibody Rabbit Monoclonal (clone RMCN1-1) is developed for research applications evaluating contractile smooth muscle cells in normal and neoplastic tissues. Calponin 1 localizes predominantly to the cytoplasm of smooth muscle cells, where it associates with actin filaments and regulates contractile function and cytoskeletal organization.

Calponin antibody, also referred to as Calponin 1 antibody, CNN1 antibody, and basic calponin antibody in the literature, targets a member of the calponin family of actin-binding proteins. Calponin 1 contains calponin homology domains and actin-binding regions that enable interaction with actin, tropomyosin, and other contractile proteins. Through these interactions, Calponin 1 modulates actomyosin ATPase activity and supports maintenance of the differentiated contractile phenotype in smooth muscle cells.

CNN1 expression is characteristic of vascular smooth muscle, gastrointestinal smooth muscle, uterine myometrium, and myoepithelial cells in glandular tissues such as breast and salivary gland. The expected staining pattern is cytoplasmic positivity in smooth muscle layers and myoepithelial cell populations. Because of this lineage-restricted distribution, Calponin 1 serves as a reliable research marker for identifying smooth muscle and myoepithelial differentiation in tissue-based studies.

In tumor research, Calponin 1 expression is frequently evaluated in leiomyoma, leiomyosarcoma, myoepithelial tumors, and other mesenchymal neoplasms. Cytoplasmic staining supports smooth muscle or myoepithelial lineage, whereas most epithelial carcinomas and non-mesenchymal malignancies demonstrate limited or absent expression. Calponin Antibody Rabbit Monoclonal (clone RMCN1-1) enables consistent detection of Calponin 1 expression patterns in research settings at NSJ Bioreagents.

This Calponin antibody complements a related Calponin 1 antibody targeting CNN1 and smooth muscle-associated contractile protein biology.

Application Notes

Optimal dilution of the Calponin antibody rabbit monoclonal should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant human protein was used as the immunogen for the Calponin antibody rabbit monoclonal.

Storage

Store the recombinant Calponin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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