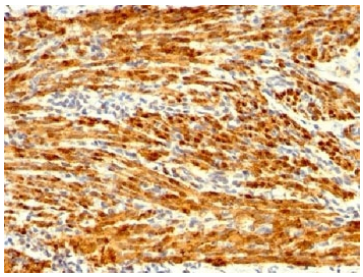
Calponin Antibody / Actin Cytoskeleton Regulation Marker [clone CNN1/1408R] (V7248)

Catalog No.	Formulation	Size
V7248-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7248-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7248SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7248IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

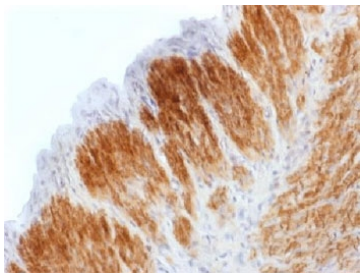
Recombinant RABBIT MONOCLONAL

Bulk quote request

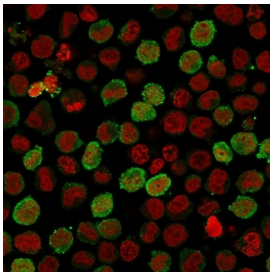
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat, Rabbit, Guinea pig
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	CNN1/1408R
Purity	Protein A affinity chromatography
UniProt	P51911
Localization	Cytoplasmic
Applications	Flow cytometry: 1-2ug/million cells (Human) Immunofluorescence: 1-3ug/ml (Human) Immunohistochemistry (FFPE): 1-2ug/ml (Human) Western blot: 2-4ug/ml (Human/Mouse/Rat/Rabbit/Guinea pig)
Limitations	This Calponin Antibody / Actin Cytoskeleton Regulation Marker is available for research use only.



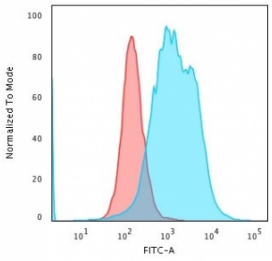
Calponin Antibody Uterus IHC. Immunohistochemistry analysis of FFPE human uterus tissue using Calponin antibody. The recombinant rabbit monoclonal antibody clone CNN1/1408R shows strong HRP-DAB brown cytoplasmic staining in smooth muscle cells of the myometrial layer, with signal distributed along contractile fibers consistent with Calponin 1 / CNN1 localization. Surrounding stromal components display minimal background staining, supporting specificity for smooth muscle-associated cytoskeletal structures. HIER: steam sections in 1 mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.



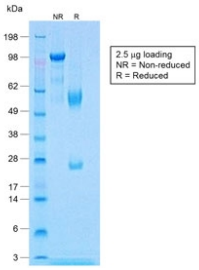
Calponin Antibody Rat Uterus IHC. Immunohistochemistry analysis of FFPE rat uterus tissue using Calponin antibody. The recombinant rabbit monoclonal antibody clone CNN1/1408R shows strong HRP-DAB brown cytoplasmic staining in smooth muscle cells of the myometrial layer, with signal following contractile fiber organization consistent with Calponin 1 / CNN1 localization. Surrounding non-smooth muscle components display minimal background staining, supporting specificity for actin-associated cytoskeletal structures. HIER: steam sections in 1 mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.



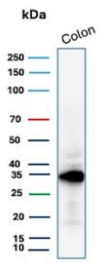
Calponin Antibody K562 IF. Immunofluorescence analysis of PFA-fixed human K562 cells using Calponin antibody (green). The recombinant rabbit monoclonal antibody clone CNN1/1408R shows cytoplasmic staining consistent with Calponin 1 / CNN1 localization, highlighting actin-associated cytoskeletal structures. Nuclei are counterstained with Reddot (red), and the merged signal supports intracellular distribution of this actin-binding protein in immunofluorescence applications.



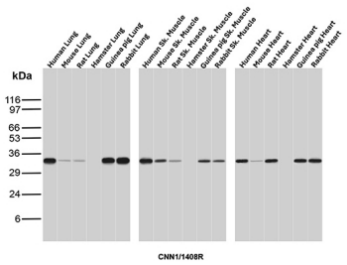
Calponin Antibody K562 FACS. Flow cytometry analysis of PFA-fixed human K562 cells using Calponin antibody. The recombinant rabbit monoclonal antibody clone CNN1/1408R was used for this assay, followed by a fluorescent secondary detection (blue). A clear rightward shift relative to the isotype control (red) indicates intracellular detection of Calponin 1 / CNN1, consistent with cytoplasmic localization of this actin-associated protein involved in cytoskeletal organization.



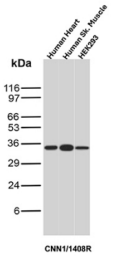
SDS-PAGE analysis of purified, BSA-free recombinant Calponin antibody (clone CNN1/1408R) as confirmation of integrity and purity.



Calponin Antibody Colon WB. Western blot analysis of human colon tissue lysate using Calponin antibody. The recombinant rabbit monoclonal antibody clone CNN1/1408R was used for this assay. A band is detected at approximately 34 kDa, consistent with the predicted molecular weight of Calponin 1 / CNN1. Signal in colon tissue reflects expression in smooth muscle components of the intestinal wall, supporting its role as an actin-associated cytoskeletal protein.



Calponin Antibody Multi-Species Tissue WB. Western blot analysis of human lung lysate, mouse lung lysate, rat lung lysate, hamster lung lysate, guinea pig lung lysate, rabbit lung lysate, human skeletal muscle lysate, mouse skeletal muscle lysate, rat skeletal muscle lysate, hamster skeletal muscle lysate, guinea pig skeletal muscle lysate, rabbit skeletal muscle lysate, human heart lysate, mouse heart lysate, rat heart lysate, hamster heart lysate, guinea pig heart lysate, and rabbit heart lysate using Calponin antibody. The recombinant rabbit monoclonal antibody clone CNN1/1408R detects a band at approximately 34 kDa, consistent with the predicted molecular weight of Calponin 1 / CNN1. Signal across multiple tissues reflects expression in smooth muscle-containing structures and supports its role in actin-associated cytoskeletal organization.



Calponin Antibody Heart, Skeletal Muscle and HEK293 WB. Western blot analysis of human heart lysate, human skeletal muscle lysate, and HEK293 cell lysate using Calponin antibody. The recombinant rabbit monoclonal antibody clone CNN1/1408R detects a band at approximately 34 kDa, consistent with the predicted molecular weight of Calponin 1 / CNN1. Signal in heart and skeletal muscle reflects expression in contractile tissues, while detection in HEK293 cells supports basal expression of this actin-associated protein involved in cytoskeletal organization.

Description

Calponin 1 (CNN1), also known as Calponin, is an actin-binding protein that plays a key role in regulating cytoskeletal organization and contractile function in smooth muscle and related cell types. The Calponin Antibody / Actin Cytoskeleton Regulation Marker is designed to detect CNN1 in pathways associated with actin filament dynamics, cytoskeletal structure, and regulation of cellular contractility. In addition to its role as a contractile protein, CNN1 contributes to organization and stabilization of actin-based structures within the cytoplasm.

Calponin antibody, also referred to as CNN1 antibody or Calponin 1 antibody in the literature, enables detection of this protein across multiple assay platforms, including immunofluorescence, western blot, immunohistochemistry, and flow cytometry. While CNN1 is highly expressed in smooth muscle tissues, its actin-associated function makes it particularly useful for studying cytoskeletal organization and filament-associated protein localization in a broader range of experimental systems. This expands its utility beyond simple tissue identification into functional studies of cellular structure.

Functionally, Calponin 1 binds directly to actin filaments and modulates actomyosin ATPase activity, linking cytoskeletal architecture with mechanical function. It plays a role in organizing filament networks and regulating contractile responses, making it an important component of actin-associated regulatory pathways. Calponin Antibody is therefore valuable for investigating cytoskeletal dynamics, contractile signaling, and structural organization within cells, particularly in systems where actin filament arrangement is of interest.

Subcellularly, CNN1 localizes along actin filaments within the cytoplasm, producing a filamentous staining pattern in immunofluorescence that closely follows actin structures. This distribution allows detailed visualization of cytoskeletal organization and provides insight into intracellular architecture. In western blot analysis, detection of CNN1 across multiple tissue lysates supports its expression in smooth muscle-containing structures, while flow cytometry enables detection of intracellular expression in relevant cell populations using appropriate permeabilization protocols.

This Calponin antibody is supported by immunofluorescence, western blot, immunohistochemistry, and flow cytometry data demonstrating consistent detection across multiple assay formats. These combined validation approaches support its use in studies of actin cytoskeleton organization, contractile regulation, and cellular structure-function relationships.

Additional Calponin 1 antibody reagents targeting CNN1 are available for related research applications.

This recombinant 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 / Actin Cytoskeleton Regulation Marker 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 recombinant Calponin antibody.

Storage

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

Alternate Names

CNN1 antibody, Calponin 1 antibody, Actin binding protein antibody, Cytoskeletal marker antibody, CNN1 protein antibody

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