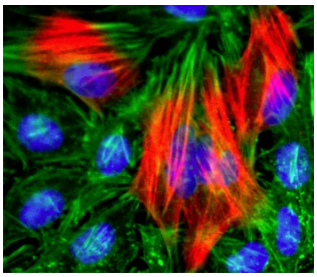
Calponin Antibody for IF / Cytoskeletal Filament Marker [clone RM262] (R20275)

Catalog No.	Formulation	Size
R20275-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

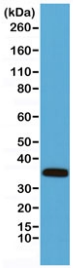
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM262
Purity	Protein A purified from animal origin-free supernatant
UniProt	P51911
Gene ID	1264
Applications	Western blot: 1:1000-1:2000 Immunocytochemistry: 1:100-1:200
Limitations	This Calponin Antibody for IF / Cytoskeletal Filament Marker is available for research use only.



Calponin Antibody HeLa IF. Immunofluorescence analysis of human HeLa cells using Calponin antibody (red). The recombinant antibody clone RM262 shows filamentous cytoplasmic staining consistent with Calponin 1 / CNN1 localization along actin-associated structures. Actin filaments are labeled with fluorescein phalloidin (green), and nuclei are counterstained with DAPI (blue). The merged signal highlights cytoskeletal organization and supports the role of Calponin as an actin-binding protein in immunofluorescence applications.



Calponin Antibody Mouse Heart WB. Western blot testing of mouse heart lysate with Calponin antibody. Predicted molecular weight ~33 kDa.

Description

Calponin 1 (CNN1) is an actin-associated protein that plays a key role in cytoskeletal organization and contractile function in smooth muscle cells. The Calponin Antibody for IF / Cytoskeletal Filament Marker is designed to detect CNN1 in immunofluorescence applications, where it reveals filamentous structures and cytoskeletal organization within cells. Its association with actin filaments makes it particularly useful for visualizing intracellular structural networks and contractile elements.

Calponin antibody, also referred to as CNN1 antibody or Calponin 1 antibody in the literature, enables detection of this protein in fluorescence-based assays that provide spatial resolution of subcellular localization. Unlike tissue-focused assays, immunofluorescence allows detailed visualization of protein distribution within individual cells, highlighting cytoskeletal organization and filament alignment. This makes CNN1 a valuable marker for studying structural aspects of smooth muscle cells and related cell types.

Functionally, Calponin 1 binds to actin filaments and modulates contractile activity, linking cytoskeletal structure with mechanical function. In immunofluorescence studies, this role is reflected by a filamentous staining pattern that follows actin structures, allowing direct visualization of cytoskeletal organization. This provides insight into cellular architecture, contractile machinery, and the spatial arrangement of actin-associated proteins.

In IF applications, CNN1 typically produces a linear or filamentous signal distributed throughout the cytoplasm, corresponding to actin filament networks. This staining pattern enables detailed analysis of cytoskeletal structure, including filament orientation and organization within cells. Such information is valuable for studies of cell morphology, differentiation, and structural integrity.

Subcellular localization of Calponin 1 along actin filaments distinguishes it from other smooth muscle markers that may display diffuse cytoplasmic staining. This distinct pattern enhances its utility for fluorescence-based imaging and supports its role as a cytoskeletal marker. These characteristics make Calponin Antibody for IF particularly useful for examining fine structural details and protein localization at high resolution.

This Calponin antibody is supported by immunofluorescence data demonstrating clear filamentous staining patterns consistent with cytoskeletal localization. These features support its use in studies of cytoskeletal organization, actin-associated protein function, and cellular morphology.

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

Application Notes

The stated application concentrations are suggested starting points. Titration of the Calponin Antibody for IF / Cytoskeletal Filament Marker may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the C-terminus of human Calponin-1 was used as the immunogen for this recombinant Calponin antibody for IF.

Storage

Store the Calponin antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

Calponin antibody, CNN1 antibody, Calponin 1 IF antibody, Cytoskeletal filament marker antibody, CNN1 fluorescence antibody

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