# CNN1 Antibody for IHC / Calponin 1 [clone MSVA-455R] (V6064)

| Catalog No. | Formulation | Size |
|---|---|---|
| V6064-100UG | Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide | 100 ug |
| V6064-20UG | Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide | 20 ug |

Recombinant RABBIT MONOCLONAL

**Bulk quote request**

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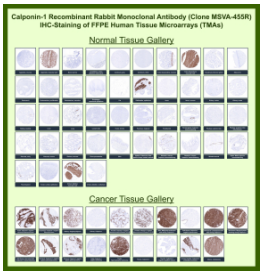
|---|---|
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Rabbit |
| **Clonality** | Recombinant Rabbit Monoclonal |
| **Isotype** | Rabbit IgG, kappa |
| **Clone Name** | MSVA-455R |
| **UniProt** | P51911 |
| **Localization** | Cytoplasm |
| **Applications** | Immunohistochemistry (FFPE) : 1:100-1:200 |
| **Limitations** | This CNN1/Calponin 1 antibody is available for research use only. |




CNN1 Antibody for IHC. Immunohistochemistry of Calponin 1 Antibody in human tissue microarrays. Recombinant rabbit monoclonal clone MSVA-455R demonstrates strong cytoplasmic staining in smooth muscle layers, including vascular and gastrointestinal smooth muscle, as well as myoepithelial cells in selected glandular tissues, while most non-smooth muscle tissues show minimal staining. In cancer tissue microarrays, robust cytoplasmic positivity is observed in smooth muscle tumors such as leiomyoma and leiomyosarcoma, with limited staining in non-mesenchymal malignancies. Staining patterns are consistent with reported Calponin 1 expression profiles in the Human Protein Atlas.

## Description

CNN1 antibody recognizes Calponin 1, an actin-binding protein encoded by the CNN1 gene and a well-established marker of smooth muscle differentiation. CNN1 Antibody for IHC (clone MSVA-455R) is a recombinant rabbit monoclonal antibody developed for immunohistochemical detection of Calponin 1 in formalin-fixed, paraffin-embedded tissues. Calponin 1 localizes predominantly to the cytoplasm of smooth muscle cells, where it associates with actin filaments and regulates smooth muscle contraction and cytoskeletal organization.

CNN1 antibody, also referred to as Calponin 1 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 cytoskeletal components. Through these interactions, Calponin 1 modulates actomyosin ATPase activity and contributes to maintenance of contractile phenotype in differentiated smooth muscle cells.

Calponin 1 is highly expressed in vascular smooth muscle, gastrointestinal smooth muscle, myoepithelial cells of breast and salivary glands, and other contractile mesenchymal cells. The expected immunohistochemical pattern is cytoplasmic staining in smooth muscle layers and myoepithelial cells. Because of this lineage-restricted expression profile, Calponin 1 serves as a reliable research marker for identifying smooth muscle and myoepithelial differentiation in normal tissues.

In tumor biology research, CNN1 expression is commonly evaluated in studies of leiomyoma, leiomyosarcoma, myoepithelial tumors, and in differential analyses distinguishing smooth muscle and myoepithelial lesions from other spindle cell neoplasms. Cytoplasmic staining supports smooth muscle or myoepithelial lineage, whereas most non-mesenchymal epithelial tumors lack expression. CNN1 Antibody for IHC (clone MSVA-455R) enables visualization of Calponin 1 expression patterns in normal and neoplastic tissues for research use at NSJ Bioreagents.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

## Application Notes

1. Optimal dilution of the CNN1/Calponin 1 antibody should be determined by the researcher.

2. This CNN1 antibody for IHC is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

## Immunogen

Synthetic peptide corresponding to residues on the C-terminus of human Calponin was used as an immunogen was used as the immunogen for the CNN1 antibody for IHC.

## Storage

CNN1/Calponin 1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.