

Rabbit Caldesmon Polyclonal Antibody | anti-CALD1 antibody

Phospho-Caldesmon (Ser759) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329790	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (89%), Horse (100%), Rabbit (89%), Dog (100%), Chicken (89%)	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Caldesmon; Polyclonal Antibody; Phospho-Caldesmon (Ser759) Antibody; CAD; CALD 1; CALD1; CALD1_HUMAN; Caldesmon 1; Caldesmon 1 Isoform 1; Caldesmon 1 Isoform 2; Caldesmon 1 Isoform 3; Caldesmon 1 Isoform 4; Caldesmon 1 Isoform 5; Caldesmon1; CDM; H CAD; HCAD; L CAD; LCAD; MGC21352; NAG22; anti-CALD1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (89%), Horse (100%), Rabbit (89%), Dog (100%), Chicken (89%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Caldesmon (Ser759) Antibody detects endogenous levels of Caldesmon only when phosphorylated at Ser759. Tissue Specificity: High-molecular-weight caldesmon (isoform 1) is predominantly expressed in smooth muscles, whereas low-molecular-weight caldesmon (isoforms 2, 3, 4 and 5) are widely distributed in non-muscle tissues and cells. Not expressed in skeletal muscle or heart.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-CALD1 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Caldesmon around the phosphorylation site of Ser759.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	In non-muscle cells, phosphorylation by CDK1 during mitosis causes caldesmon to dissociate from microfilaments. Phosphorylation reduces caldesmon binding to actin, myosin, and calmodulin as well as its inhibition of actomyosin ATPase activity. Phosphorylation also occurs in both quiescent and dividing smooth muscle cells with similar effects on the interaction with actin and calmodulin and on microfilaments reorganization. CDK1-mediated phosphorylation promotes Schwann cell migration during peripheral nerve regeneration (By similarity).
Similarity	The N-terminal part seems to be a myosin/calmodulin-binding domain, and the C-terminal a tropomyosin/actin/calmodulin-binding domain. These two domains are separated by a central helical region in the smooth-muscle form. Belongs to the caldesmon family.
Subcellular Location	Cytoplasm>Cytoskeleton. Cytoplasm>Myofibril. Cytoplasm>Cytoskeleton>Stress fiber. Note: On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle).
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data

At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody(Red), diluted at 1/600, was used as secondary antibody.



IHC (Immunohistochemistry)

At 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



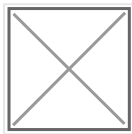
IHC (Immunohistochemisry)

At 1/100 staining Mouse muscle tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)

Staining Rat skin tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of Caldesmon (Phospho-Ser759) using NaVO3 treated HepG2 whole cell lysates.-/+ means absence or presence of N peptide1/4non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-CALD1 antibody	Actin- and myosin-binding protein implicated in the regulation of actomyosin interactions in smooth muscle and nonmuscle cells (could act as a bridge between myosin and actin filaments). Stimulates actin binding of tropomyosin which increases the stabilization of actin filament structure. In muscle tissues, inhibits the actomyosin ATPase by binding to F-actin. This inhibition is attenuated by calcium-calmodulin and is potentiated by tropomyosin. Interacts with actin, myosin, two molecules of tropomyosin and with calmodulin. Also plays an essential role during cellular mitosis and receptor capping. Involved in Schwann cell migration during peripheral nerve regeneration (By similarity).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4826657
NCBI GeneID	800
NCBI Accession #	NP_004333.1
NCBI GenBank Nucleotide #	NM_004342.6
UniProt Accession #	Q05682; Q13978; Q13979; Q14741; Q14742; Q9UD91; A8K0X1
Molecular Weight	93,231 Da
NCBI Official Full Name	caldesmon isoform 2
NCBI Official Synonym Full Names	caldesmon 1
NCBI Official Symbol	CALD1
NCBI Official Synonym Symbols	CDM; HCAD; LCAD; H-CAD; L-CAD; NAG22
NCBI Protein Information	caldesmon

UniProt Protein Name	Caldesmon
UniProt Gene Name	CALD1
UniProt Synonym Gene Names	CAD; CDM; CDM
UniProt Entry Name	CALD1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/caldesmon-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/329790>