

# Caldesmon, HMW (h-Caldesmon) (Smooth Muscle Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone CALD1/820 + h-CALD ]

Catalog # AH12566

## Product Information

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<b>Application</b>	IHC, IF, FC
<b>Primary Accession</b>	<a href="#">Q05682</a>
<b>Other Accession</b>	<a href="#">800</a> , <a href="#">490203</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	Mouse / IgG's
<b>Clone Names</b>	CALD1/820 + h-CALD
<b>Calculated MW</b>	93231

## Additional Information

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<b>Gene ID</b>	800
<b>Other Names</b>	Caldesmon, CDM, CALD1, CAD, CDM
<b>Application Note</b>	IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
<b>Storage</b>	Store at 2 to 8°C.Antibody is stable for 24 months.
<b>Precautions</b>	Caldesmon, HMW (h-Caldesmon) (Smooth Muscle Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CALD1
<b>Synonyms</b>	CAD, CDM
<b>Function</b>	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).

<b>Cellular Location</b>	Cytoplasm, cytoskeleton {ECO:0000250 UniProtKB:P13505}. Cytoplasm, myofibril {ECO:0000250 UniProtKB:P13505}. Cytoplasm, cytoskeleton, stress fiber {ECO:0000250 UniProtKB:P13505}. Note=On thin filaments in smooth muscle and on stress fibers in fibroblasts (nonmuscle) {ECO:0000250 UniProtKB:P13505}
<b>Tissue Location</b>	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

## Background

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Recognizes a protein of 150kDa, which is identified as the high molecular weight variant of Caldesmon. Two closely related variants of human caldesmon have been identified which are different in their electrophoretic mobility and cellular distribution. The h-caldesmon variant (120-150kDa) is predominantly expressed in smooth muscle whereas l-caldesmon (70-80kDa) is found in non- muscle tissue and cells. Neither of the two variants has been detected in skeletal muscle. This MAb recognizes only the 150kDa variant (h-caldesmon) in Western blots of human aortic media extracts and is unreactive with fibroblast extracts from cultivated human foreskin. Caldesmon is a developmentally regulated protein involved in smooth muscle and non-muscle contraction.

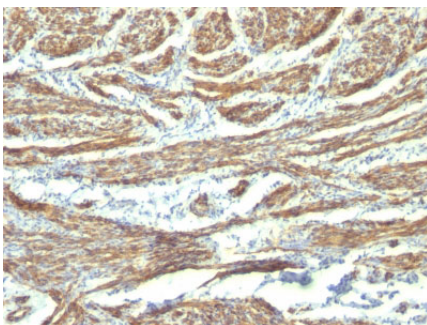
## References

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Watanabe, K., Tajino, T., Sekiguchi, M. and Suzuki, T. 2000. H-Caldesmon as a specific marker for smooth muscle tumors. Comparison with other smooth muscle markers in bone tumors. *Am. J. Clin. Pathol.* 113: 663-668. | Frid MG, et al. Phenotypic changes of human smooth muscle cells during development: Late expression of heavy caldesmon and calponin. *Dev Biol* 1992; 153:185 |

## Images

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Formalin-fixed, paraffin-embedded human Uterus stained with Caldesmon Monoclonal Antibody (CALD1/820 + h-CALD).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.