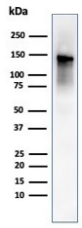
Caldesmon Antibody for WB / CALD1 Western Blot Antibody [clone SPM168] (V2941)

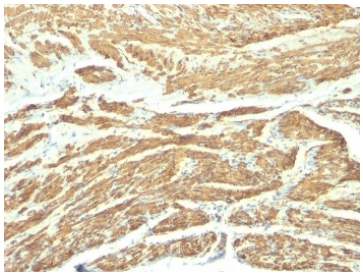
Catalog No.	Formulation	Size
V2941-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2941-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2941SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2941IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SPM168
Purity	Protein G affinity chromatography
UniProt	Q05682
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Western blot: 1-2ug/ml
Limitations	This Caldesmon antibody is available for research use only.



Caldesmon Antibody for WB / CALD1 Western Blot Antibody (clone rCALD1/820). Western blot analysis of Caldesmon (CALD1) in human ovary tissue lysate. Lane 1: human ovary tissue lysate. A band is detected at approximately 120-150 kDa, consistent with the predicted molecular weight of Caldesmon / CALD1 and representing the high molecular weight smooth muscle-associated h-caldesmon isoform. CALD1 is known to produce multiple isoforms, with lower molecular weight forms typically observed at approximately 70-80 kDa in non-muscle cells, while the higher molecular weight isoform predominates in smooth muscle tissues. The observed band pattern reflects known CALD1 isoform-dependent migration behavior in western blot analysis.



IHC: Formalin-fixed, paraffin-embedded human uterus stained with Caldesmon antibody (clone SPM168).

Description

Caldesmon (CALD1) is an actin- and myosin-binding regulatory protein that plays a central role in smooth muscle contraction and cytoskeletal organization. Caldesmon Antibody for WB (clone SPM168) is designed for western blot detection of CALD1, enabling detailed analysis of its isoform-dependent migration patterns and expression across different cell types.

Caldesmon Antibody for WB (clone SPM168) supports clear interpretation of CALD1 banding behavior in western blot experiments, where multiple isoforms produce distinct molecular weight signals. Caldesmon antibody, also referred to as CALD1 antibody or h-caldesmon antibody, is particularly valuable in western blot analysis because CALD1 does not resolve as a single band. Instead, a predicted molecular weight of approximately 93 kDa is often accompanied by lower molecular weight bands at approximately 70-80 kDa in non-muscle cells and higher molecular weight bands at approximately 120-150 kDa corresponding to the smooth muscle-associated h-caldesmon isoform.

This Caldesmon Antibody for WB (clone SPM168) is uniquely positioned for isoform-resolved western blot detection, allowing researchers to distinguish between contractile smooth muscle-associated forms and lower molecular weight cytoskeletal variants. The observed migration differences reflect isoform composition and structural variation rather than simple degradation, making accurate band interpretation critical when analyzing CALD1 expression. Clone SPM168 antibody enables consistent detection of these bands, supporting reliable comparison between tissue types and experimental conditions.

At the molecular level, CALD1 produces high molecular weight and low molecular weight isoforms that serve distinct biological roles. The high molecular weight h-caldesmon isoform is enriched in differentiated smooth muscle cells and is closely associated with actomyosin regulation and contractile function. In contrast, lower molecular weight isoforms are more broadly expressed and contribute to cytoskeletal remodeling in non-muscle cells. Western blot analysis using Caldesmon Antibody for WB (clone SPM168) enables direct visualization of these isoform-specific differences, providing insight into cellular phenotype and functional state.

Due to its strong performance in western blot applications and its ability to resolve multiple CALD1 isoforms across a wide molecular weight range, Caldesmon Antibody for WB (clone SPM168) provides a reliable tool for detecting caldesmon expression in studies focused on muscle biology, cytoskeletal regulation, and cellular differentiation. Its consistent banding patterns and alignment with known CALD1 isoform biology support confident interpretation of western blot results in both smooth muscle and non-muscle systems.

Application Notes

Optimal dilution of the Caldesmon Antibody for WB / CALD1 Western Blot Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9, for 10-20 min followed by cooling at RT for 20 min.
2. 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

Crude human uterus extract was used as the immunogen for the Caldesmon Antibody for WB / CALD1 Western Blot Antibody.

Storage

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

Alternate Names

Caldesmon antibody, CALD1 antibody, Caldesmon western blot antibody, CALD1 WB antibody, h-Caldesmon antibody, Caldesmon isoform antibody

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