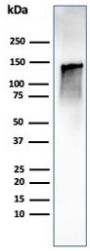
Caldesmon Antibody / CALD1 Cell Motility and Migration Regulatory Protein Antibody [clone CALD1/1424R] (V7252)

Catalog No.	Formulation	Size
V7252-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7252-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7252SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7252IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

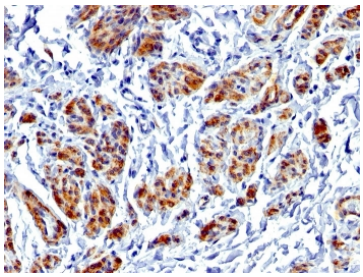
Recombinant RABBIT MONOCLONAL

Bulk quote request

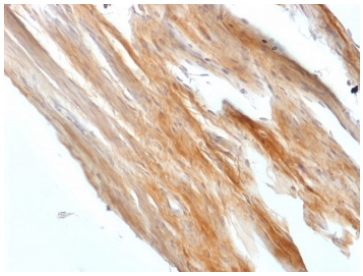
Availability	1-3 business days
Species Reactivity	Human, Rat
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	CALD1/1424R
Purity	Protein A affinity chromatography
UniProt	Q05682
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Western blot: 1-2ug/ml
Limitations	This Caldesmon antibody is available for research use only.



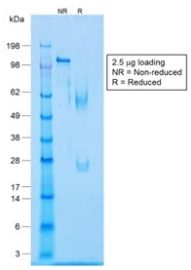
Caldesmon Antibody / CALD1 Cell Motility and Migration Regulatory Protein Antibody. Western blot analysis of Caldesmon (CALD1) in human ovary tissue lysate. Lane 1: human ovary tissue lysate. A band is detected at approximately 120-150 kDa, consistent with the predicted molecular weight of Caldesmon / CALD1 and representing the high molecular weight h-caldesmon isoform associated with contractile cell populations. Additional lower molecular weight bands may be observed at approximately 70-80 kDa corresponding to non-muscle isoforms involved in cytoskeletal remodeling during cell motility and migration. The observed banding pattern reflects isoform-dependent expression of CALD1 linked to dynamic cytoskeletal regulation and cellular movement.



Caldesmon Antibody / CALD1 Cell Motility and Migration Regulatory Protein Antibody. Immunohistochemistry analysis of Caldesmon (CALD1) in human uterus tissue. FFPE human uterus stained with Caldesmon Antibody, clone CALD1/1424R, demonstrates strong HRP-DAB brown cytoplasmic staining in smooth muscle cells of the myometrium. The staining highlights elongated, spindle-shaped cells with organized cytoplasmic filament networks consistent with cytoskeletal remodeling and dynamic structural organization associated with cell motility and migration processes. Surrounding stromal and epithelial cells show minimal staining, supporting localization of CALD1 to cytoskeletal systems involved in regulated cellular movement. Heat-induced epitope retrieval was performed using EDTA buffer at pH9.



IHC testing of FFPE rat uterus with recombinant Caldesmon antibody (clone CALD1/1424R). Required HIER: boil tissue sections in 1mM EDTA, pH9, for 10-20 min.



SDS-PAGE analysis of purified, BSA-free recombinant Caldesmon antibody (clone CALD1/1424R) as confirmation of integrity and purity.

Description

Caldesmon (CALD1) plays a specialized role in regulating cell motility by coordinating cytoskeletal remodeling required for directional movement and dynamic shape change. Caldesmon Antibody / CALD1 Cell Motility and Migration Regulatory Protein Antibody is used to detect CALD1 in studies focused on how cells reorganize their internal structure to support migration, protrusion formation, and mechanical adaptation during movement.

Cell motility depends on tightly regulated cycles of actin filament assembly and disassembly, and caldesmon contributes to this process by modulating filament stability in regions undergoing active remodeling. Rather than simply stabilizing cytoskeletal structures, CALD1 enables controlled flexibility, allowing cells to extend lamellipodia and filopodia at the leading edge while coordinating retraction at the trailing edge. This regulatory function makes caldesmon an important mediator of migration dynamics rather than a static structural component.

Caldesmon Antibody, also referred to as CALD1 antibody or h-caldesmon antibody, is particularly valuable for studying how cytoskeletal proteins support movement-related processes. Caldesmon is often enriched in regions of active

cytoskeletal turnover, where it helps balance filament stability with the need for rapid reorganization. This balance is essential for directional migration, ensuring that cells maintain structural coherence while adapting to external cues.

At the molecular level, CALD1 regulates interactions between actin filaments and associated proteins in a manner that supports coordinated cytoskeletal remodeling. By influencing filament organization and turnover, caldesmon enables cells to rapidly adjust their internal architecture in response to chemotactic signals, mechanical gradients, or environmental barriers encountered during migration. This dynamic regulation distinguishes CALD1 from proteins that primarily maintain static cytoskeletal structures.

Cell motility is fundamental to processes such as wound healing, immune surveillance, and developmental morphogenesis, and caldesmon contributes to these processes by facilitating efficient cytoskeletal reorganization. Its involvement in migration-related pathways highlights a functional role centered on movement and adaptability rather than contractile force generation or structural maintenance alone.

Due to its role in coordinating cytoskeletal remodeling during movement, Caldesmon Antibody provides a reliable tool for detecting CALD1 expression in studies focused on cell motility, migration mechanisms, and dynamic structural adaptation. Its association with migration-specific cytoskeletal activity supports investigation of how cells move, respond to external cues, and reorganize their internal architecture during locomotion.

Application Notes

Titering of the Caldesmon Antibody / CALD1 Cell Motility and Migration Regulatory Protein Antibody may be required for optimal performance.

1. 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

A full length human protein was used as the immunogen for the Caldesmon Antibody / CALD1 Cell Motility and Migration Regulatory Protein Antibody.

Storage

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

Alternate Names

Caldesmon antibody, CALD1 antibody, Caldesmon cell motility antibody, CALD1 migration protein antibody, h-Caldesmon antibody, Caldesmon cytoskeletal movement antibody

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