Anti- Caldesmon

Clone	Species	Ig Class
CALD1/7024R	Rabbit	IgG / Kappa

Catalog No.	Description
	Manual
AND76-5M	6 ml of Ready-to-Use Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
	Concentrated
NUD76-UC	1 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
NUD76-5UC	0.5 ml of Concentrated Antibody for use with BioGenex Super Sensitive™ Detection Systems OR equivalent detection system
	Automation
AND76-10M	10 ml of Ready-to-Use Antibody in a barcode labeled vial for use with BioGenex Super Sensitive™ Detection Systems and i6000™ Automated Staining Systems
AYD76-YCD	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx Elite ® Staining System, 160 tests
AYD76-50D	Ready-to-Use Antibody in Barcode labeled vial for use on the Xmatrx Elite ® Staining System, 50 tests
AYD76-4M	Ready-to-Use Antibody in Barcode labeled Vial for use on the NanoVip™ Staining System, 50 tests
AYD76-10M	Ready-to-Use Antibody in Barcode labeled Vial for use on the NanoVip™ 300 Staining System, 100 tests

Recommended Detection Kits:
https://biogenex.com/ihc-detection-kits/

Antibody Incubation: 30-60 Min at RT

Control Tissue: Leiomyoma tissue as available with Biogenex FB-D76N* & FG-D76N*

Recommended Dilution for Concentrated Antibody: 1:20 - 50 in HK941

Recommended Pretreatment: EZ-AR2 (HK522-XAK)

Intended Use

For Research Use. This antibody is designed for the specific localization of human Caldesmon in formalin-fixed, paraffin- embedded (FFPE) tissue sections. Evaluation must be performed by a qualified pathologist.

Summary and Explanation

Caldesmon is a cytoskeletal actin- and calmodulin-binding protein encoded by the CALD1 gene on chromosome 7q33. Caldesmon plays a role in regulating actin–myosin interactions, stabilizing the cytoskeleton, and modulating cell motility. In diagnostic pathology, h-caldesmon immunohistochemistry is a reliable marker of smooth muscle differentiation. It is strongly expressed in leiomyomas and leiomyosarcomas, and helps distinguish these from tumors of myofibroblastic, fibroblastic, or other mesenchymal origins.
The clone CALD1/7024R is a recombinant rabbit monoclonal antibody specific for caldesmon, validated for IHC. It demonstrates strong cytoplasmic staining in smooth muscle tissues and smooth muscle tumors, with minimal background in negative tissues, making it valuable for diagnostic histopathology and research in soft tissue pathology.

Storage and Handling

Store at 2–8°C. Fresh dilutions, if required, should be prepared prior to use and are stable and steady for up to one day at room temperature (20-26°C). Diluted antibody preparations can be refrigerated or frozen for extended shelf life.

Principles of the Procedure

IHC involves binding of a primary antibody to a target antigen, followed by visualization using a chromogenic detection system. The procedure can be manual or automated. Include appropriate positive and negative controls in each run.

Reagents Provided

Rabbit Monoclonal Antibody to human Caldesmon is affinity purified and diluted in PBS, pH 7.2, containing 1% BSA and 0.09% sodium azide.

Precautions

Contains <0.1% sodium azide. Follow standard safety protocols. Wear appropriate PPE, avoid skin and mucous membrane contact, and do not pipette by mouth. Dispose of reagents per regulatory guidelines. SDS available on request.

Quality Control

Refer to BioGenex Detection System documentation for guidance on quality control, including recommended positive and negative controls.

Troubleshooting

For detection-related issues, consult the BioGenex Detection System documentation. For assistance, contact BioGenex Technical Support at 1-800-421-4149 or support@biogenex.com, or reach out to your local distributor.

Expected Results

This antibody shows Cytoplasm staining in positive cells in FFPE tissues. Refer to the BioGenex website for representative images. Result interpretation is the user's responsibility and should be confirmed with established diagnostic methods.

Limitations of the Procedure

Staining results may vary due to improper tissue processing, fixation, or tissue variability. Endogenous enzymes or biotin may cause non-specific staining. HBsAg-positive tissues may yield false positives with HRP systems. Poor counterstaining or mounting can affect interpretation.

Bibliography:

1. Genomic structure of the human caldesmon gene (PNAS) DOI: 10.1073/pnas.89.24.12122
2. h-Caldesmon is diffusely positive in leiomyomas/myometria/leiomyosarcomas; negative in endometrial stromal neoplasms — helps distinguish these uterine mesenchymal tumors DOI: 10.1097/00000478-200102000-00014
3. Demonstrated that leiomyomas, leiomyosarcomas, angioleiomyomas, and glomus tumors show intense h-caldesmon expression, other types (e.g. myofibroblastic, MFH etc.) do not. Helps in confirming smooth muscle differentiation. DOI: 10.1097/00000478-200111000-00013

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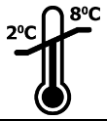	Temperature Limitation		Research Use only
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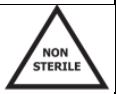	Non-Sterile		Consult Instructions for Use
	Manufacturer, BioGenex		

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