abcam

Product datasheet

Anti-Desmin antibody [Y66] - Low endotoxin, Azide free ab216616

Recombinant RabMAb

24 References 16 Images

Overview

Product name	Anti-Desmin antibody [Y66] - Low endotoxin, Azide free
Description	Rabbit monoclonal [Y66] to Desmin - Low endotoxin, Azide free
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, Flow Cyt (Intra), IHC-P, WB **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Rat, Guinea pig, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Epitope	**ab32362** reacts with an epitope located in the C terminal region of desmin.
Positive control	WB: Human skeletal muscle, fetal heart and fetal muscle tissue lysates. Mouse and rat heart tissue lysates. Guinea pig heart and muscle tissue lysates. ICC/IF: A673 cells. IHC-P: Human skeletal muscle, uterus and urinary bladder tissues. Flow Cyt (intra): C2C12 and HeLa cells.
General notes	ab216616 is the carrier-free version of **ab32362**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production

For more information **see here**.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Our **Low endotoxin, azide-free formats** have low endotoxin level (≤ 1 EU/ml, determined by the LAL assay) and are free from azide, to achieve consistent experimental results in functional assays.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	Y66
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab216616 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
Flow Cyt (Intra)		Use at an assay dependent concentration. **ab199376**- Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**.
WB		Use at an assay dependent concentration.

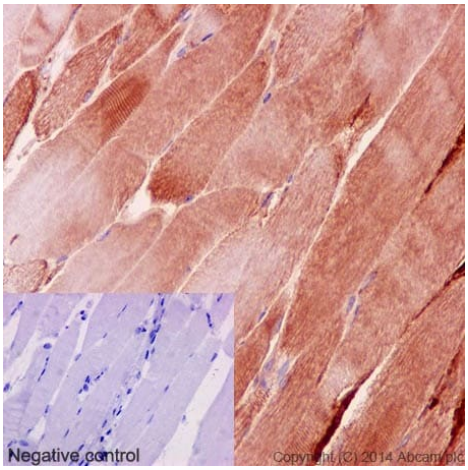
Application notes Is unsuitable for IP.

Target

Function Desmin are class-III intermediate filaments found in muscle cells. In adult striated muscle they form a fibrous network connecting myofibrils to each other and to the plasma membrane from the periphery of the Z-line structures.

Involvement in disease	Defects in DES are the cause of myopathy myofibrillar desmin-related (MFM-DES) [MIM:601419]; also known as desmin-related myopathy (DRM). A neuromuscular disorder characterized by skeletal muscle weakness associated with cardiac conduction blocks, arrhythmias, restrictive heart failure, and by myofibrillar destruction with intracytoplasmic accumulation of desmin-reactive deposits in cardiac and skeletal muscle cells. Defects in DES are the cause of cardiomyopathy dilated type 1I (CMD1I) [MIM:604765]. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death. Defects in DES are the cause of neurogenic scapuloperoneal syndrome Kaeser type (Kaeser syndrome) [MIM:181400]. Kaeser syndrome is an autosomal dominant disorder with a peculiar scapuloperoneal distribution of weakness and atrophy. A large clinical variability is observed ranging from scapuloperoneal, limb grindle and distal phenotypes with variable cardiac or respiratory involvement. Facial weakness, dysphagia and gynaecomastia are frequent additional symptoms. Affected men seemingly bear a higher risk of sudden, cardiac death as compared to affected women. Histological and immunohistochemical examination of muscle biopsy specimens reveal a wide spectrum of findings ranging from near normal or unspecific pathology to typical, myofibrillar changes with accumulation of desmin.
Sequence similarities	Belongs to the intermediate filament family.
Cellular localization	Cytoplasm.

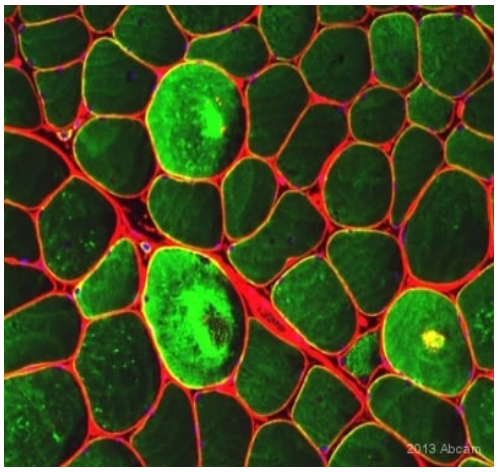
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human skeletal muscle tissue labelling Desmin with purified **ab32362** at 1/2000. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. **ab97051**, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

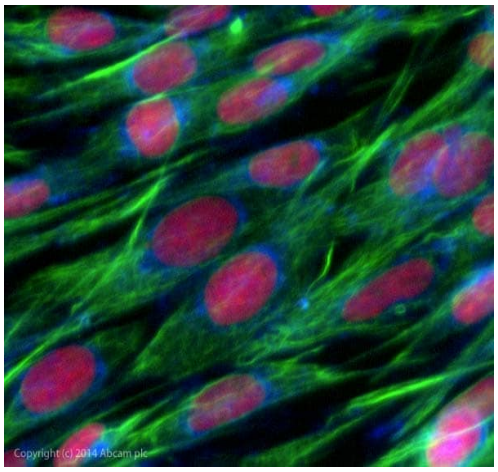


Immunocytochemistry/ Immunofluorescence - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

This image is courtesy of an anonymous Abreview.

Unpurified **ab32362** staining Desmin (green) in Human skeletal muscle cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with methacarn and blocked with 10% serum for 20 minutes at 22°C. Samples were incubated with primary antibody (1/150) for 12 hours. An Alexa Fluor® 488-conjugated Goat anti-rabbit IgG polyclonal (1/200) was used as the secondary antibody. Blue - DAPI-nuclei. Red - WGA. 40X objective.

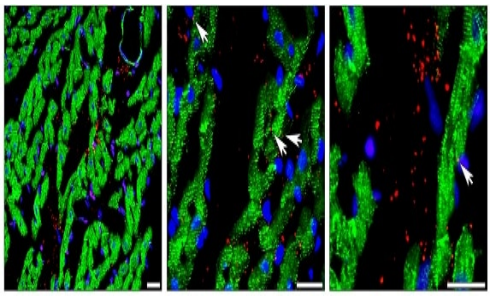
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).



Immunocytochemistry/ Immunofluorescence - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Clone Y66 (ab216616) has been successfully conjugated by Abcam. This image was generated using Anti-Desmin antibody [Y66] - Cytoskeleton Marker (Alexa Fluor® 488). Please refer to **ab185033** for protocol details.

ab185033 staining Desmin in SV40LT-SMC cells. The cells were fixed with 4% formaldehyde (10min) and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated with **ab185033** at 1/50 dilution overnight at +4°C (shown in green). AlexaFluor®350 WGA was used at a 1/200 dilution and incubated for 1h with the cells, to label plasma membranes (shown in blue). Nuclear DNA was labelled in red with 1.25 µM DRAQ5™ (**ab108410**).



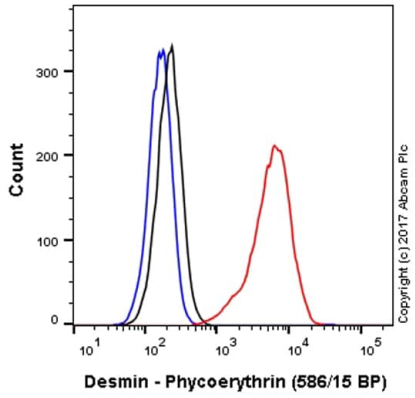
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Image from Cowan DB et al. Intracoronary Delivery of Mitochondria to the Ischemic Heart for Cardioprotection. PLoS One 11:e0160889 (2016).

Immunofluorescent analysis of Human mitochondria injected rabbit hearts sections stained for Desmin (Green) using **ab32362**. MTCO2, the human-specific mitochondrial marker was stained in red, and the nuclei was stained using the DNA stain DAPI (blue).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

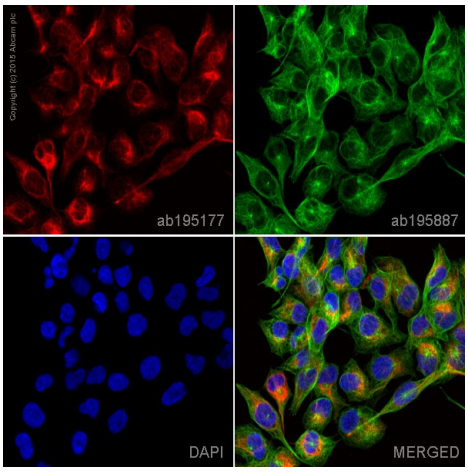
Clone Y66 (ab216616) has been successfully conjugated by Abcam. This image was generated using Anti-Desmin antibody [Y66] - Cytoskeleton Marker (PE). Please refer to **ab224935** for protocol details.

Overlay histogram showing SV40LT-SMC cells stained with **ab224935** (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (**ab224935**, 1/1000 dilution) for 30 min at 22°C.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Phycoerythrin (**ab209478**) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Yellow/Green laser (561nm) and 586/15 bandpass filter.

This antibody gave a positive signal in SV40LT-SMC cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.



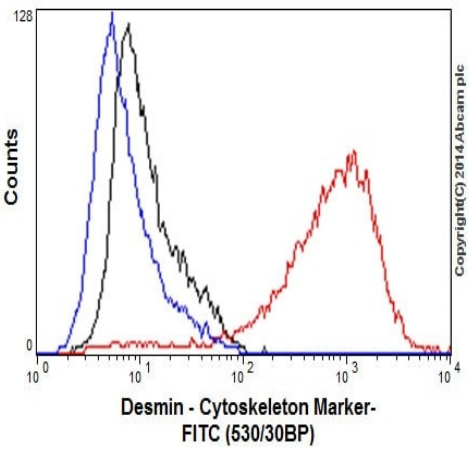
Immunocytochemistry/ Immunofluorescence - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Clone Y66 (ab216616) has been successfully conjugated by Abcam. This image was generated using Anti-Desmin antibody [Y66] - Cytoskeleton Marker (Alexa Fluor® 647). Please refer to **ab195177** for protocol details.

ab195177 staining Desmin in A673 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with **ab195177** at a 1/100 dilution (shown in red) and **ab195887**, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at a 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

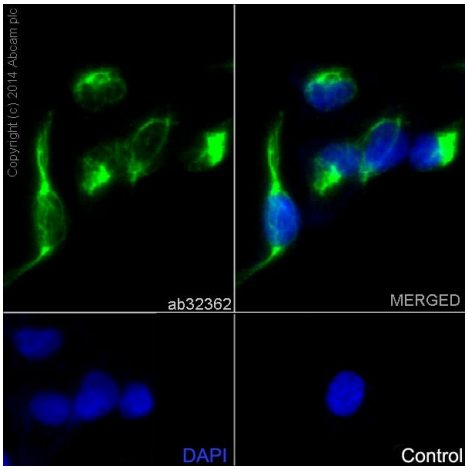
This product also gave a positive signal under the same testing conditions in A673 cells fixed with 100% methanol (5 min)



Flow Cytometry (Intracellular) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Intracellular Flow Cytometry analysis of C2C12 cells labelling Desmin with purified **ab32362** at 1/70 (red). Cells were fixed with 2% paraformaldehyde. A FITC-conjugated goat anti-rabbit IgG (1/150) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

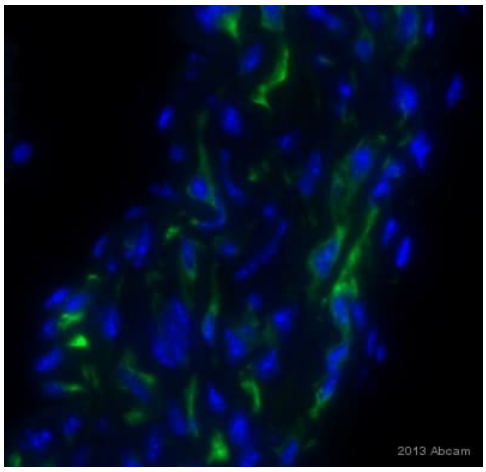


Immunocytochemistry/ Immunofluorescence - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Immunocytochemistry/Immunofluorescence analysis of A673 cells labelling Desmin with purified **ab32362** at 1/50. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. **ab150077**, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.

Control: primary antibody (1/50) and secondary antibody, **ab150120**, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

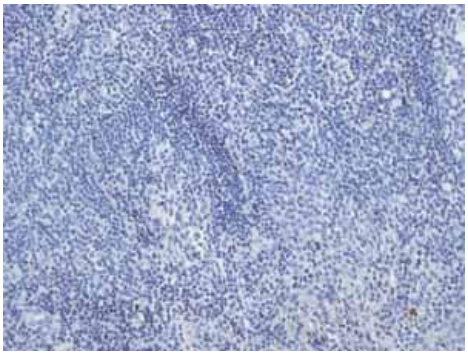


Immunocytochemistry/ Immunofluorescence - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

This image is courtesy of an anonymous Abreview.

Unpurified **ab32362** staining Desmin (green) in Mouse aorta smooth muscle cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with formalin and blocked with 10% serum for 20 minutes at 22°C. Samples were incubated with primary antibody (1/150) for 1 hour at 22°C. An Alexa Fluor® 488-conjugated Goat anti-rabbit IgG polyclonal (1/200) was used as the secondary antibody. Blue - nuclei.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

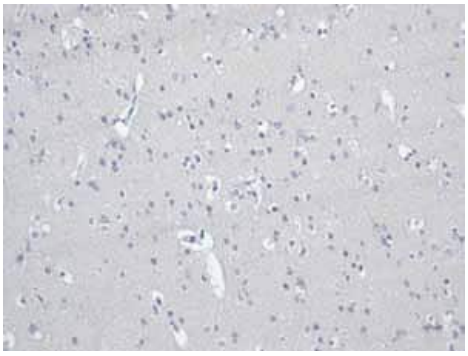


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Immunohistochemistry (Formalin/PFA-fixed parffin-embedded sections) analysis of normal human tonsil tissue. Unpurified **ab32362** shows negative staining.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

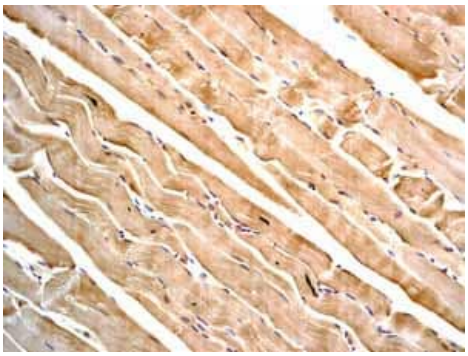


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Immunohistochemistry (Formalin/PFA-fixed parffin-embedded sections) analysis of normal human brain tissue. Unpurified **ab32362** shows negative staining.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

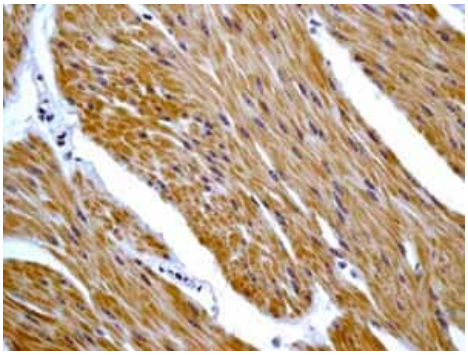


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Immunohistochemistry (Formalin/PFA-fixed parffin-embedded sections) analysis of human skeletal muscle tissue labelling Desmin with unpurified **ab32362**.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

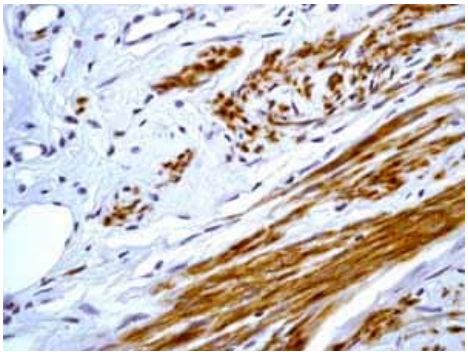


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Immunohistochemistry (Formalin/PFA-fixed parffin-embedded sections) analysis of normal human urinary bladder tissue labelling Desmin with unpurified **ab32362**.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

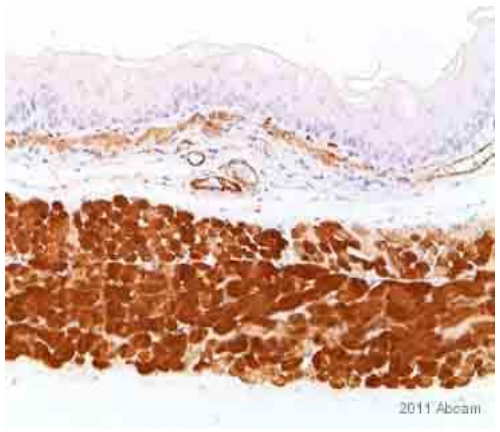


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

Immunohistochemistry (Formalin/PFA-fixed parffin-embedded sections) analysis of normal human uterus tissue labelling Desmin with unpurified **ab32362**.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).

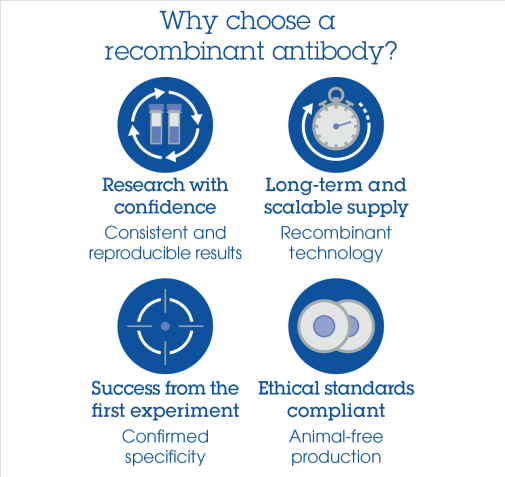
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)
This image is courtesy of an anonymous Abreview.

Unpurified **ab32362** staining Desmin in nude rat esophageal tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and a heat mediated antigen retrieval step was performed using citrate buffer pH 6. Samples were then blocked with 1% BSA for 20 minutes at 25°C and then incubated with unpurified **ab32362** at a 1/400 dilution for 16 hours at 25°C. The secondary used was an undiluted goat anti-rabbit HRP conjugated polyclonal.Striated muscle cells of muscular propria are strongly positive for desmin. Smooth muscle cells and vascular smooth muscle cells in submucosal layer are also positive for desmin.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab32362**).



Anti-Desmin antibody [Y66] - Low endotoxin, Azide free (ab216616)

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