

Desmuslin (B-8): sc-376944

BACKGROUND

Cytoskeletal intermediate filaments constitute a diverse group of proteins that are expressed in a highly tissue-specific manner. Intermediate filaments are composed of two-chain, α -helical, coiled-coil molecules arranged on an imperfect helical lattice. They are widely used as markers for distinguishing individual cell types within a tissue and identifying the origins of metastatic tumors. Desmuslin is a type-VI intermediate filament which may act as a mechanical support to the muscle fibers by forming a linkage between the extracellular matrix via the Z-disk and the dystrophin-associated protein complex (DAPC). The Desmuslin protein interacts with desmin as well as α -dystrobrevin and is mainly expressed in heart and skeletal muscle, but can also be detected in brain. Desmuslin contains a conserved rod domain, a short N-terminal domain and a long C-terminal domain.

REFERENCES

1. Mizuno, Y., et al. 2001. Desmuslin, an intermediate filament protein that interacts with α -dystrobrevin and Desmin. *Proc. Natl. Acad. Sci. USA* 98: 6156-6161.
2. Mizuno, Y., et al. 2001. Genomic organization and single-nucleotide polymorphism map of Desmuslin, a novel intermediate filament protein on chromosome 15q26.3. *BMC Genet.* 2: 8.
3. Mizuno, Y., et al. 2004. β -synemin localizes to regions of high stress in human skeletal myofibers. *Muscle Nerve* 30: 337-346.
4. Robson, R.M., et al. 2004. Muscle intermediate filament proteins. *Methods Cell Biol.* 78: 519-553.

CHROMOSOMAL LOCATION

Genetic locus: SYNM (human) mapping to 15q26.3; Synm (mouse) mapping to 7 C.

SOURCE

Desmuslin (B-8) is a mouse monoclonal antibody raised against amino acids 741-1040 mapping within an internal region of Desmuslin of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Desmuslin (B-8) is available conjugated to agarose (sc-376944 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376944 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376944 PE), fluorescein (sc-376944 FITC), Alexa Fluor[®] 488 (sc-376944 AF488), Alexa Fluor[®] 546 (sc-376944 AF546), Alexa Fluor[®] 594 (sc-376944 AF594) or Alexa Fluor[®] 647 (sc-376944 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376944 AF680) or Alexa Fluor[®] 790 (sc-376944 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Desmuslin (B-8) is recommended for detection of Desmuslin isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Desmuslin siRNA (h): sc-60525, Desmuslin siRNA (m): sc-60526, Desmuslin shRNA Plasmid (h): sc-60525-SH, Desmuslin shRNA Plasmid (m): sc-60526-SH, Desmuslin shRNA (h) Lentiviral Particles: sc-60525-V and Desmuslin shRNA (m) Lentiviral Particles: sc-60526-V.

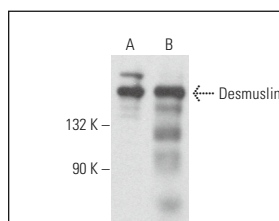
Molecular Weight of Desmuslin: 170 kDa.

Positive Controls: mouse skeletal muscle extract: sc-364250, human heart extract: sc-363763 or BC₃H1 cell lysate: sc-2299.

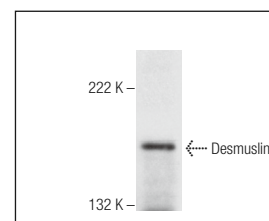
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Desmuslin (B-8): sc-376944. Western blot analysis of Desmuslin expression in BC₃H1 whole cell lysate (A) and human heart tissue extract (B).



Desmuslin (B-8): sc-376944. Western blot analysis of Desmuslin expression in mouse skeletal muscle tissue extract.

SELECT PRODUCT CITATIONS

1. Skelton, L.A., et al. 2023. Retinal gliosis and phenotypic diversity of intermediate filament induction and remodeling upon acoustic blast overpressure (ABO) exposure to the rat eye. *Exp. Eye Res.* 234: 109585.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.