

# 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,  $\alpha$ -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  $\alpha$ -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

- Mizuno, Y., et al. 2001. Desmuslin, an intermediate filament protein that interacts with  $\alpha$ -dystrobrevin and Desmin. Proc. Natl. Acad. Sci. USA 98: 6156-6161.
- 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.
- Mizuno, Y., et al. 2004.  $\beta$ -synemin localizes to regions of high stress in human skeletal myofibers. Muscle Nerve 30: 337-346.
- Robson, R.M., et al. 2004. Muscle intermediate filament proteins. Methods Cell Biol. 78: 519-553.
- Jing, R., et al. 2005. Intermediate filament protein synemin is present in human reactive and malignant astrocytes and associates with ruffled membranes in astrocytoma cells. Glia 50: 107-120.

## 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  $\mu$ g IgG<sub>1</sub> 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376944 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376944 PE), fluorescein (sc-376944 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376944 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376944 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376944 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376944 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376944 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376944 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## 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  $\mu$ g per 100-500  $\mu$ 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.

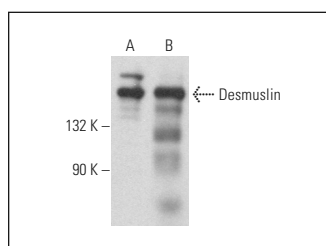
Molecular Weight of Desmuslin: 170 kDa.

Positive Controls: mouse skeletal muscle extract: sc-364250, human heart extract: sc-363763 or BC<sub>3</sub>H1 cell lysate: sc-2299.

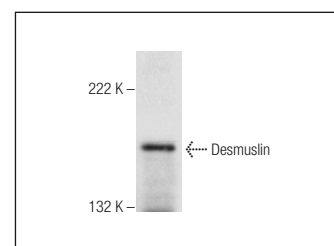
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Desmuslin (B-8): sc-376944. Western blot analysis of Desmuslin expression in BC<sub>3</sub>H1 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.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.