

# Nebulette (E-12): sc-393795

## BACKGROUND

Nebulin and Nebulette are homologous thin-filament associated proteins expressed in skeletal and cardiac muscles, respectively. Nebulette, unlike nebulin, is confined to the Z-disc region of the sarcomere and does not span the whole thin filament length. Nebulette colocalizes with  $\alpha$ -actinin in the pre-, nascent, and mature myofibrils. A polymorphism in the Actin-binding motif of Nebulette is a genetic marker of susceptibility to nonfamilial idiopathic dilated cardiomyopathy (IDC), characterized by a thin-walled heart and systolic dysfunction.

## REFERENCES

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- Millevoi, S., et al. 1998. Characterization of Nebulette and nebulin and emerging concepts of their roles for vertebrate Z-discs. *J. Mol. Biol.* 282: 111-123.
- Moncman, C.L., et al. 1999. Functional dissection of Nebulette demonstrates Actin binding of nebulin-like repeats and Z-line targeting of SH3 and linker domains. *Cell Motil. Cytoskeleton* 44: 1-22.
- Arimura, T., et al. 2000. Characterization of the human Nebulette gene: a polymorphism in an Actin-binding motif is associated with nonfamilial idiopathic dilated cardiomyopathy. *Hum. Genet.* 107: 440-451.
- Moncman, C.L., et al. 2000. Architecture of the thin filament-Z-line junction: lessons from Nebulette and nebulin homologues. *J. Muscle Res. Cell Motil.* 21: 153-169.
- Fock, U., et al. 2002. Nebulin is a thin filament protein of the cardiac muscle of the agnathans. *J. Muscle Res. Cell Motil.* 23: 205-213.
- Ogut, O., et al. 2003. Interactions between nebulin-like motifs and thin filament regulatory proteins. *J. Biol. Chem.* 278: 3089-3097.
- SWISS-PROT/TrEMBL (O76041). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: NEBL (human) mapping to 10p12.31; Neb1 (mouse) mapping to 2 A3.

## SOURCE

Nebulette (E-12) is a mouse monoclonal antibody raised against amino acids 921-994 mapping near the C-terminus of Nebulette of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Nebulette (E-12) is recommended for detection of Nebulette 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 Nebulette siRNA (h): sc-106293, Nebulette siRNA (m): sc-149894, Nebulette shRNA Plasmid (h): sc-106293-SH, Nebulette shRNA Plasmid (m): sc-149894-SH, Nebulette shRNA (h) Lentiviral Particles: sc-106293-V and Nebulette shRNA (m) Lentiviral Particles: sc-149894-V.

Molecular Weight (predicted) of human Nebulette: 116 kDa.

Molecular Weight (predicted) of mouse Nebulette: 52 kDa.

Molecular Weight (observed) of human Nebulette: 126 kDa.

Molecular Weight (observed) of mouse Nebulette: 125 kDa.

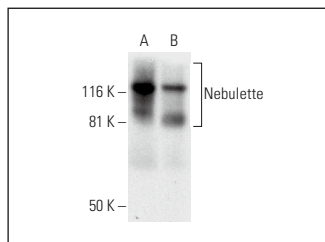
Positive Controls: human heart extract: sc-363763, mouse heart extract: sc-2254 or rat heart extract: sc-2393.

## RECOMMENDED SUPPORT REAGENTS

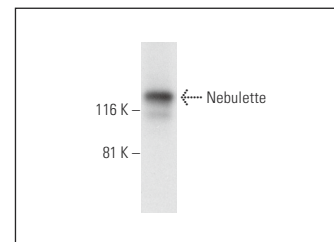
To ensure optimal results, the following support reagents are recommended:

- 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™ 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



Nebulette (E-12): sc-393795. Western blot analysis of Nebulette expression in mouse heart (A) and rat heart (B) tissue extracts.



Nebulette (E-12): sc-393795. Western blot analysis of Nebulette expression in human heart tissue extract.

## 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.