

# Nebulette (G-9): sc-393784

## 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

1. Moncman, C.L., et al. 1995. Nebulette: a 107 kD nebulin-like protein in cardiac muscle. *Cell Motil. Cytoskeleton* 32: 205-225.
2. 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.
3. 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.
4. 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.
5. Moncman, C.L., et al. 2000. Architecture of the thin filament-Z-line junction: lessons from Nebulette and nebulin homologies. *J. Muscle Res. Cell Motil.* 21: 153-169.

## CHROMOSOMAL LOCATION

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

## SOURCE

Nebulette (G-9) 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>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nebulette (G-9) is available conjugated to agarose (sc-393784 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393784 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393784 PE), fluorescein (sc-393784 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393784 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393784 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393784 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393784 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393784 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393784 AF790), 200  $\mu$ 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

Nebulette (G-9) 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.

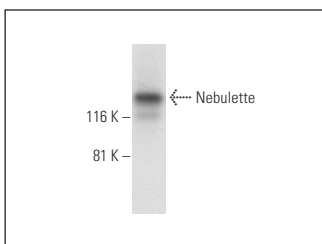
Molecular Weight (observed) of mouse Nebulette: 125 kDa.

Positive Controls: human heart extract: sc-363763.

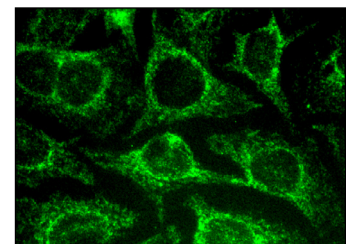
## RECOMMENDED SUPPORT REAGENTS

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



Nebulette (G-9): sc-393784. Western blot analysis of Nebulette expression in human heart tissue extract.



Nebulette (G-9): sc-393784. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Rudolph, F., et al. 2020. Deconstructing sarcomeric structure-function relations in titin-BioID knock-in mice. *Nat. Commun.* 11: 3133.

## STORAGE

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