BACKGROUND

Nebulin is a large filamentous protein specific to muscle tissue that may function as a “ruler” for Actin filament length. N-RAP (Nebulin-related anchoring protein) is a 1,730 amino acid protein that may play a role in myofibril assembly and in mediating force transmission in cardiomyocytes. N-RAP localizes to the intercalated disks of cardiac muscle and the myoteniduous junctions of skeletal muscle, where it is exclusively expressed. Existing as four alternatively spliced isoforms, N-RAP contains one N-terminal LIM domain and forty-four Nebulin repeats. N-RAP binds α-actinin and Filamin 2 during myofibril assembly and is also known to interact with Actin, KBTBD10, Talin-1 and vinculin. The gene encoding N-RAP maps to human chromosome 10q25.3 and mouse chromosome 19 D2.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: NRAP (human) mapping to 10q25.3; Nrap (mouse) mapping to 19 D2.

SOURCE

N-RAP (H-5) is a mouse monoclonal antibody raised against amino acids 189-468 mapping within an internal region of N-RAP of human origin.

PRODUCT

Each vial contains 200 µg IgG1 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

N-RAP (H-5) is recommended for detection of N-RAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 N-RAP siRNA (h): sc-90390, N-RAP siRNA (m): sc-149773, N-RAP shRNA Plasmid (h): sc-90390-SH, N-RAP shRNA Plasmid (m): sc-149773-SH, N-RAP siRNA (h) Lentiviral Particles: sc-90390-V and N-RAP siRNA (m) Lentiviral Particles: sc-149773-V.

Molecular Weight of N-RAP: 198 kDa.

Positive Controls: human heart extract: sc-363763, human skeletal muscle extract: sc-363776 or Sol8 cell lysate: sc-2249.

RECOMMENDED SUPPORT REAGENTS

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

DATA

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

N-RAP (H-5): sc-514480. Western blot analysis of N-RAP expression in human heart (A) and human skeletal muscle (B) tissue extracts and Sol8 whole cell lysate (C).

N-RAP (H-5): sc-514480. Western blot analysis of N-RAP expression in C2C12 (A) and L6 (B) whole cell lysates.

N-RAP (H-5): sc-514480. Western blot analysis of N-RAP expression in C2C12 (A) and L6 (B) whole cell lysates.