

taperin (H-4): sc-515824

BACKGROUND

Taperin (TPRN) is a 711 amino acid sensory epithelial protein that belongs to the taperin family and exists as 4 alternatively spliced isoforms. While it is localized prominently at the taper regions of hair cell stereocilia, taperin expression is detected in fetal cochlea. Defects in taperin are the cause of deafness autosomal recessive type 79 (DFNB79), which is characterized by progressive hearing loss leading to profound deafness. The gene that encodes taperin contains 9,689 bases and maps to human chromosome 9q34.3. Housing over 900 genes, chromosome 9 comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

1. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (Rendu-Osler disease). *Respiration* 74: 361-378.
2. Zeitz, M.J., et al. 2009. Organization of the amplified type I interferon gene cluster and associated chromosome regions in the interphase nucleus of human osteosarcoma cells. *Chromosome Res.* 17: 305-319.
3. Gold-von Simson, G., et al. 2009. Kinetin in familial dysautonomia carriers: implications for a new therapeutic strategy targeting mRNA splicing. *Pediatr. Res.* 65: 341-346.
4. Rehman, A.U., et al. 2010. Targeted capture and next-generation sequencing identifies C9orf75, encoding taperin, as the mutated gene in nonsyndromic deafness DFNB79. *Am. J. Hum. Genet.* 86: 378-388.
5. Li, Y., et al. 2010. Mutations in TPRN cause a progressive form of autosomal-recessive nonsyndromic hearing loss. *Am. J. Hum. Genet.* 86: 479-484.

CHROMOSOMAL LOCATION

Genetic locus: TPRN (human) mapping to 9q34.3; Tprn (mouse) mapping to 2 A3.

SOURCE

taperin (H-4) is a mouse monoclonal antibody raised against amino acids 421-529 mapping within an internal region of taperin 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.

taperin (H-4) is available conjugated to agarose (sc-515824 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515824 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515824 PE), fluorescein (sc-515824 FITC), Alexa Fluor® 488 (sc-515824 AF488), Alexa Fluor® 546 (sc-515824 AF546), Alexa Fluor® 594 (sc-515824 AF594) or Alexa Fluor® 647 (sc-515824 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515824 AF680) or Alexa Fluor® 790 (sc-515824 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

taperin (H-4) is recommended for detection of taperin 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 taperin siRNA (h): sc-92581, taperin siRNA (m): sc-141910, taperin shRNA Plasmid (h): sc-92581-SH, taperin shRNA Plasmid (m): sc-141910-SH, taperin shRNA (h) Lentiviral Particles: sc-92581-V and taperin shRNA (m) Lentiviral Particles: sc-141910-V.

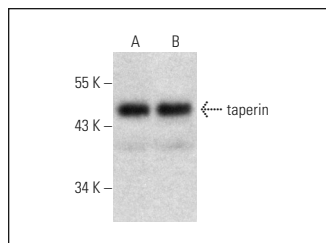
Molecular Weight of taperin: 76 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

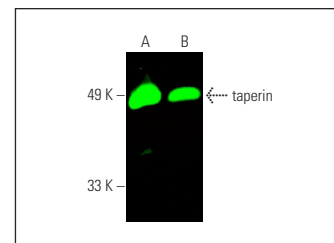
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



taperin (H-4): sc-515824. Western blot analysis of taperin expression in A-431 (A) and HeLa (B) whole cell lysates.



taperin (H-4): sc-515824. Near-infrared western blot analysis of taperin expression in A-431 (A) and HeLa (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

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.

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