

TAPP1 (D-5): sc-374622

BACKGROUND

Tandem PH (pleckstrin homology) domain-containing protein 1 (TAPP1) is a widely expressed cytoplasmic adaptor protein related to Bam32. Highest expression levels of TAPP1 are found in skeletal muscle, spleen, lung, thymus and placenta. Upon growth factor stimulation and activation of phosphoinositol 3-kinase, TAPP1 is recruited to the plasma membrane and accumulates in the F-Actin-rich membrane ruffles. This recruitment occurs through the specific interaction of the TAPP1 C-terminal PH domain with phosphatidylinositol 3,4-bisphosphate. Syntrophins are responsible for regulating the localization of TAPP1, and together, this may regulate Actin-mediated membrane ruffling and cytoskeletal reorganization. The overexpression of TAPP1, in the absence of syntrophin overexpression, blocks the formation of circular ruffles. TAPP1 may also be involved in the activation of B and T cells.

REFERENCES

1. Dowler, S., et al. 2000. Identification of pleckstrin-homology-domain-containing proteins with novel phosphoinositide-binding specificities. *Biochem. J.* 351: 19-31.
2. Thomas, C.C., et al. 2001. Crystal structure of the phosphatidylinositol 3,4-bisphosphate-binding pleckstrin homology (PH) domain of tandem PH-domain-containing protein 1 (TAPP1): molecular basis of lipid specificity. *Biochem. J.* 358: 287-294.
3. Kimber, W.A., et al. 2002. Evidence that the tandem-pleckstrin-homology-domain-containing protein TAPP1 interacts with Ptd(3,4)P₂ and the multi-PDZ-domain-containing protein MUPP1 *in vivo*. *Biochem. J.* 361: 525-536.
4. Marshall, A.J., et al. 2002. TAPP1 and TAPP2 are targets of phosphatidylinositol 3-kinase signaling in B cells: sustained plasma membrane recruitment triggered by the B-cell antigen receptor. *Mol. Cell. Biol.* 22: 5479-5491.

CHROMOSOMAL LOCATION

Genetic locus: PLEKHA1 (human) mapping to 10q26.13; Plekha1 (mouse) mapping to 7 F3.

SOURCE

TAPP1 (D-5) is a mouse monoclonal antibody raised against amino acids 116-195 mapping within an internal region of TAPP1 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.

TAPP1 (D-5) is available conjugated to agarose (sc-374622 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374622 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374622 PE), fluorescein (sc-374622 FITC), Alexa Fluor® 488 (sc-374622 AF488), Alexa Fluor® 546 (sc-374622 AF546), Alexa Fluor® 594 (sc-374622 AF594) or Alexa Fluor® 647 (sc-374622 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374622 AF680) or Alexa Fluor® 790 (sc-374622 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TAPP1 (D-5) is recommended for detection of TAPP1 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 TAPP1 siRNA (h): sc-63100, TAPP1 siRNA (m): sc-63101, TAPP1 shRNA Plasmid (h): sc-63100-SH, TAPP1 shRNA Plasmid (m): sc-63101-SH, TAPP1 shRNA (h) Lentiviral Particles: sc-63100-V and TAPP1 shRNA (m) Lentiviral Particles: sc-63101-V.

Molecular Weight of TAPP1: 45 kDa.

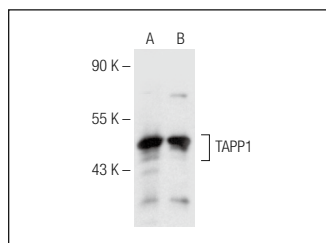
Positive Controls: rat cerebellum extract: sc-2398, SHP-77 whole cell lysate: sc-364258 or Jurkat nuclear extract: sc-2132.

RECOMMENDED SUPPORT REAGENTS

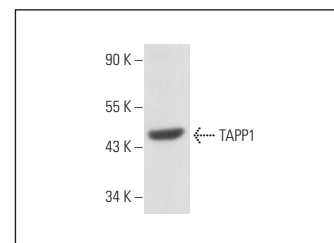
To ensure optimal results, the following support reagents are recommended:

- 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



TAPP1 (D-5): sc-374622. Western blot analysis of TAPP1 expression in SHP-77 whole cell lysate (A) and Jurkat nuclear extract (B).



TAPP1 (D-5): sc-374622. Western blot analysis of TAPP1 expression in rat cerebellum 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 for detailed protocols and support products.