

TAPP2 (m): 293T Lysate: sc-123912

BACKGROUND

Tandem PH (pleckstrin homology) domain-containing protein 2 (TAPP2) is a widely expressed cytoplasmic adaptor protein related to BAM32. Highest expression levels of TAPP2 are found in heart and kidney tissues. Upon growth factor stimulation and activation of phosphoinositol 3-kinase, TAPP2 is recruited to the plasma membrane and accumulates in F-Actin-rich membrane ruffles. This recruitment occurs through the specific interaction of the TAPP2 C-terminal PH domain with phosphatidylinositol 3,4-bisphosphate. TAPP2 is positively regulated by FcγRIII and SHIP. The overexpression of TAPP2 increases NFAT-dependent transcriptional activation after G cell Ag receptor ligation and increases the sustained phase of the calcium response. TAPP2 may play a role 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. 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.
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. Kimber, W.A., et al. 2003. Interaction of the protein tyrosine phosphatase PTPL1 with the PtdIns(3,4)P₂-binding adaptor protein TAPP1. *Biochem. J.* 376: 525-535.
5. Krahn, A.K., et al. 2004. Two distinct waves of membrane-proximal B cell antigen receptor signaling differentially regulated by Src homology 2-containing inositol polyphosphate 5-phosphatase. *J. Immunol.* 172: 331-339.
6. Hogan, A., et al. 2004. The phosphoinositol 3,4-bisphosphate-binding protein TAPP1 interacts with syntrophins and regulates actin cytoskeletal organization. *J. Biol. Chem.* 279: 53717-53724.
7. Allam, A., et al. 2005. Role of the adaptor proteins Bam32, TAPP1 and TAPP2 in lymphocyte activation. *Immunol. Lett.* 97: 7-17.
8. Ivetac, I., et al. 2005. The type I α inositol polyphosphate 4-phosphatase generates and terminates phosphoinositide 3-kinase signals on endosomes and the plasma membrane. *Mol. Biol. Cell* 16: 2218-2233.
9. Cheung, S.M., et al. 2007. Regulation of phosphoinositide 3-kinase signaling by oxidants: Hydrogen peroxide selectively enhances immunoreceptor-induced recruitment of phosphatidylinositol (3,4) bisphosphate-binding PH domain proteins. *Cell. Signal.* 19: 902-912.

CHROMOSOMAL LOCATION

Genetic locus: *Plekha2* (mouse) mapping to 8 A2.

RESEARCH USE

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

PRODUCT

TAPP2 (m): 293T Lysate represents a lysate of mouse TAPP2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TAPP2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TAPP2 antibodies. Recommended use: 10-20 µl per lane.

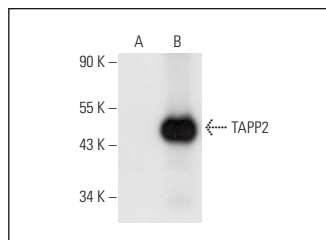
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TAPP2 (D-2): sc-166593 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse TAPP2 expression in TAPP2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

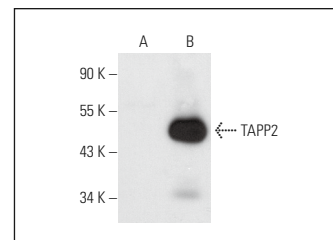
RECOMMENDED SUPPORT REAGENTS

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.

DATA



TAPP2 (D-2): sc-166593. Western blot analysis of TAPP2 expression in non-transfected: sc-117752 (A) and mouse TAPP2 transfected: sc-123912 (B) 293T whole cell lysates.



TAPP2 (A-7): sc-166351. Western blot analysis of TAPP2 expression in non-transfected: sc-117752 (A) and mouse TAPP2 transfected: sc-123912 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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