

# TRIM3 (27): sc-136363

## BACKGROUND

Tripartite motif-containing protein 3 (TRIM3), also known as RING finger protein 22 (RNF22), RING finger protein 97 (RNF97) or brain-expressed RING finger protein (BERP), is a 744 amino acid member of the TRIM family, also known as the RING-B-box coiled-coil (RBCC) family. Members of the RBCC family have an N-terminal RING finger, followed by one or two zinc-binding domains (B-box domains), a leucine coiled-coil region and a variable C-terminal domain. Localized to cytoplasmic filaments, TRIM3 has been shown to interact with  $\alpha$ -actinin-4 and Myosin V, two proteins associated with the Actin cytoskeleton. Specifically,  $\alpha$ -actinin-4 interacts with the RBCC domain of TRIM3, and the C-terminal tail of Myosin V interacts with the unique C-terminal  $\beta$ -propeller domain of TRIM3. These associations suggest that TRIM3 may play a role in cell motility and cargo transport. Three named isoforms of TRIM3 exist as a result of alternative splicing events.

## REFERENCES

1. El-Husseini, A.E. and Vincent, S.R. 1999. Cloning and characterization of a novel RING finger protein that interacts with class V myosins. *J. Biol. Chem.* 274: 19771-19777.
2. El-Husseini, A.E., Kwasnicka, D., Yamada, T., Hirohashi, S. and Vincent, S.R. 2000. BERP, a novel ring finger protein, binds to  $\alpha$ -actinin-4. *Biochem. Biophys. Res. Commun.* 267: 906-911.
3. Raymond, A., Meroni, G., Fantozzi, A., Merla, G., Cairo, S., Luzi, L., Riganelli, D., Zanaria, E., Messali, S., Cainarca, S., Guffanti, A., Minucci, S., Pelicci, P.G. and Ballabio, A. 2001. The tripartite motif family identifies cell compartments. *EMBO J.* 20: 2140-2151.
4. El-Husseini, A.E., Fretier, P. and Vincent, S.R. 2001. Cloning and characterization of a gene (RNF22) encoding a novel brain expressed ring finger protein (BERP) that maps to human chromosome 11p15.5. *Genomics* 71: 363-367.

## CHROMOSOMAL LOCATION

Genetic locus: TRIM3 (human) mapping to 11p15.4; Trim3 (mouse) mapping to 7 E3.

## SOURCE

TRIM3 (27) is a mouse monoclonal antibody raised against amino acids 19-128 of TRIM3 of rat 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.

TRIM3 (27) is available conjugated to agarose (sc-136363 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136363 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA.

## STORAGE

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

## APPLICATIONS

TRIM3 (27) is recommended for detection of TRIM3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TRIM3 siRNA (h): sc-96295, TRIM3 siRNA (m): sc-154644, TRIM3 shRNA Plasmid (h): sc-96295-SH, TRIM3 shRNA Plasmid (m): sc-154644-SH, TRIM3 shRNA (h) Lentiviral Particles: sc-96295-V and TRIM3 shRNA (m) Lentiviral Particles: sc-154644-V.

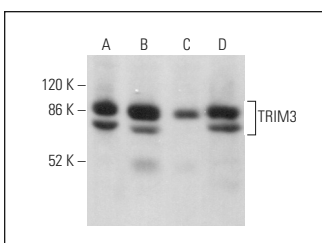
Molecular Weight of TRIM3: 82 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or Neuro-2A whole cell lysate: sc-364185.

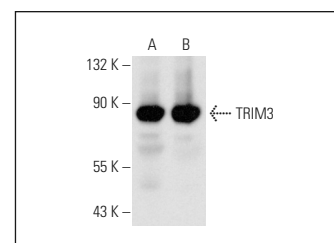
## RECOMMENDED SUPPORT REAGENTS

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™ 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



TRIM3 (27): sc-136363. Western blot analysis of TRIM3 expression in Neuro-2A (A), C6 (B), SK-BR-3 (C) and ARPE-19 (D) whole cell lysates.



TRIM3 (27): sc-136363. Western blot analysis of TRIM3 expression in mouse brain (A) and rat brain (B) tissue extracts.

## SELECT PRODUCT CITATIONS

1. Raheja, R., Liu, Y., Hukkelhoven, E., Yeh, N. and Koff, A. 2014. The ability of TRIM3 to induce growth arrest depends on RING-dependent E3 ligase activity. *Biochem. J.* 458: 537-545.
2. Werner, C.T., Mitra, S., Martin, J.A., Stewart, A.F., Lepack, A.E., Gobira, P.H., Ramakrishnan, A., Wang, Z.J., Neve, R.L., Gancarz, A.M., Shen, L., Maze, I. and Dietz, D.M. 2019. Ubiquitin-proteasomal regulation of chromatin remodeler INO80 in the nucleus accumbens mediates persistent cocaine craving. *Sci. Adv.* 5: eaay0351.

## RESEARCH USE

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