

Ran BP-3 (C-5): sc-373678

BACKGROUND

The small Ras-related protein Ran, also called TC4, is a nuclear localized GTPase implicated in a diverse array of cellular processes including DNA replication, entry into and exit from mitosis, and the transport of RNA and proteins through the nuclear pore complex. Like Ras, active Ran GTP and inactive Ran GDP levels are tightly regulated by guanine nucleotide exchange factors (GEFs) and GTPase activating proteins (GAPs). The abundant GEF, RCC1 (regulator of chromosome condensation 1), increases the rate at which Ran exchanges GDP for GTP. Ran BP-3 acts as a scaffold protein to promote the efficient assembly of export complexes. Specifically, Ran BP-3 promotes binding of CRM1 to RCC1 in the presence of Ran. Ran BP-3 has also been shown to bind β -catenin, thereby inhibiting the Wnt signaling pathway.

REFERENCES

1. Bischoff, F.R., et al. 1995. Co-activation of RanGTPase and inhibition of GTP dissociation by Ran-GTP binding protein RanBP1. *EMBO J.* 14: 705-715.
2. Ren, M., et al. 1995. Separate domains of the Ran GTPase interact with different factors to regulate nuclear protein import and RNA processing. *Mol. Cell. Biol.* 15: 2117-2124.

CHROMOSOMAL LOCATION

Genetic locus: RANBP3 (human) mapping to 19p13.3; Ranbp3 (mouse) mapping to 17 D.

SOURCE

Ran BP-3 (C-5) is a mouse monoclonal antibody raised against amino acids 101-244 mapping within an internal region of Ran BP-3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ran BP-3 (C-5) is recommended for detection of Ran BP-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 Ran BP-3 siRNA (h): sc-61442, Ran BP-3 siRNA (m): sc-61443, Ran BP-3 shRNA Plasmid (h): sc-61442-SH, Ran BP-3 shRNA Plasmid (m): sc-61443-SH, Ran BP-3 shRNA (h) Lentiviral Particles: sc-61442-V and Ran BP-3 shRNA (m) Lentiviral Particles: sc-61443-V.

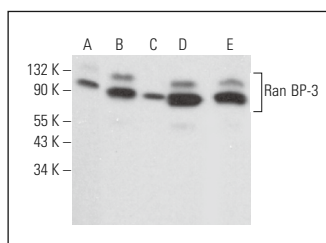
Molecular Weight of Ran BP-3: 60-100 kDa.

Positive Controls: F9 cell lysate: sc-2245, 3T3-L1 cell lysate: sc-2243 or A549 cell lysate: sc-2413.

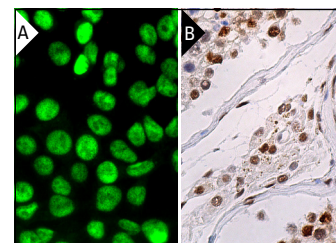
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Ran BP-3 (C-5): sc-373678. Western blot analysis of Ran BP-3 expression in F9 (A), A549 (B), 3T3-L1 (C) and Daudi (D) whole cell lysates and MOLT-4 nuclear extract (E).



Ran BP-3 (C-5): sc-373678. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and Leydig cells (B).

SELECT PRODUCT CITATIONS

1. Yu, Z., et al. 2018. Identification of a transporter complex responsible for the cytosolic entry of nitrogen-containing bisphosphonates. *Elife* 7: e36620.
2. Orre, L.M., et al. 2019. SubCellBarCode: proteome-wide mapping of protein localization and relocalization. *Mol. Cell* 73: 166-182.e7.
3. Wang, Y., et al. 2019. Deficiency of mouse mast cell protease 4 mitigates cardiac dysfunctions in mice after myocardium infarction. *Biochim. Biophys. Acta Mol. Basis Dis.* 1865: 1170-1181.

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.