

# Ran BP-3 (M-175): sc-135169

## 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  $\beta$ -catenin, thereby inhibiting the Wnt signaling pathway.

## REFERENCES

1. Scheffzek, K., et al. 1995. Crystal structure of the nuclear Ras-related protein Ran in its GDP-bound form. *Nature* 374: 378-381.
2. Beddow, A.L., et al. 1995. The Ran/TC4 GTPase-binding domain: identification by expression cloning and characterization of a conserved sequence motif. *Proc. Natl. Acad. Sci. USA* 92: 3328-3332.

## CHROMOSOMAL LOCATION

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

## SOURCE

Ran BP-3 (M-175) is a rabbit polyclonal antibody raised against amino acids 1-175 mapping at the N-terminus of Ran BP-3 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Ran BP-3 (M-175) is recommended for detection of Ran BP-3 of mouse, rat and, to a lesser extent, 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)], 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.

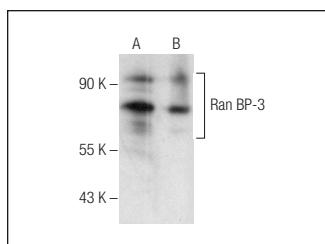
Molecular Weight of Ran BP-3: 60-100 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138 or mouse eye extract: sc-364241.

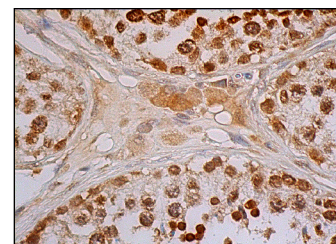
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



Ran BP-3 (M-175): sc-135169. Western blot analysis of Ran BP-3 expression in NIH/3T3 nuclear extract (A) and mouse eye tissue extract (B).



Ran BP-3 (M-175): sc-135169. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Ran BP-3 (D-2): sc-377253** or **Ran BP-3 (C-5): sc-373678**, our highly recommended monoclonal alternatives to Ran BP-3 (M-175).