SANTA CRUZ BIOTECHNOLOGY, INC.

Ran BP-3 (H-144): sc-135168

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 Ran GTPase and inhibition of GTP dissociation by Ran GTP binding protein Ran BP-1. EMBO J. 14: 705-715.
2. Scheffzek, K., et al. 1995. Crystal structure of the nuclear Ras-related protein Ran in its GDP-bound form. Nature 374: 378-381.

CHROMOSOMAL LOCATION

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

SOURCE

Ran BP-3 (H-144) is a rabbit polyclonal antibody raised against amino acids 101-244 mapping within an internal region of Ran BP-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ran BP-3 (H-144) is recommended for detection of Ran BP-3 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

Ran BP-3 (H-144) is also recommended for detection of Ran BP-3 in additional species, including equine and canine.

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.

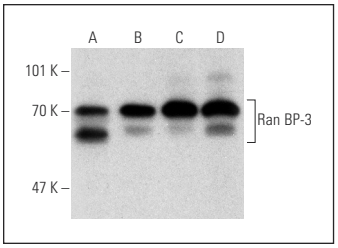
Molecular Weight of Ran BP-3: 60-100 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, SHP-77 whole cell lysate: sc-364258 or U-937 cell lysate: sc-2239.

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ Mounting Medium: sc-24941.

DATA



Ran BP-3 (H-144): sc-135168. Western blot analysis of Ran BP-3 expression in SHP-77 (**A**), U-937 (**B**), Y79 (**C**) and Jurkat (**D**) whole cell lysates.

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 or our catalog for detailed protocols and support products.