

Ran BP-2 (H-300): sc-28577

BACKGROUND

The small Ras-related protein Ran, also known as 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. Ran-binding protein 2 (Ran BP-2 or Nup358) is a large scaffold cyclophilin-related protein expressed in photoreceptor cells that contains four RanBD1 domains. Localization at cytoplasmic fibrils emanates Ran BP-2 from the nuclear pore complex, which then interacts with Ran-GTPase to support its role in nucleocytoplasmic transport processes. In humans, the Ran BP-2 gene lies in a hot spot for recombination on chromosome 2q. The genetic heterogeneity renders further significance of this genomic region in human disease due to its possible involvement in genetically linked disorders such as juvenile nephronophthisis, congenital hepatic fibrosis and chorioretinal dysplasia. Duplication events that occurred at the 3 Mb distal to Ran BP-2 gave rise to eight new genes encoding RGPD (RanBP2-like), GRIP domain-containing proteins, which are highly homologous to Ran BP-2.

REFERENCES

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2. Mahajan, R., Delphin, C., Guan, T., Gerace, L. and Melchior, F. 1997. A small ubiquitin-related polypeptide involved in targeting RanGAP1 to nuclear pore complex protein RanBP2. *Cell* 88: 97-107.
3. Singh, B.B., Patel, H.H., Roepman, R., Schick, D. and Ferreira, P.A. 1999. The zinc finger cluster domain of RanBP2 is a specific docking site for the nuclear export factor, exportin-1. *J. Biol. Chem.* 274: 37370-37378.
4. Villa Braslavsky, C.I., Nowak, C., Gorlich, D., Wittinghofer, A. and Kuhlmann, J. 2000. Different structural and kinetic requirements for the interaction of Ran with the Ran-binding domains from RanBP2 and importin- β . *Biochemistry* 39: 11629-11639.
5. Fauser, S., Aslanukov, A., Roepman, R. and Ferreira, P.A. 2001. Genomic organization, expression, and localization of murine Ran-binding protein 2 (RanBP2) gene. *Mamm. Genome* 12: 406-415.

SOURCE

Ran BP-2 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Ran BP-2 of human origin.

PRODUCT

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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Ran BP-2 (H-300) is recommended for detection of Ran BP-2 of mouse, rat and human origin, and the RGPD family of proteins of human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Ran BP-2 (H-300) is also recommended for detection of Ran BP-2 and the RGPD family of proteins in additional species, including bovine and porcine.

Suitable for use as control antibody for Ran BP-2 siRNA (m): sc-36381, Ran BP-2 shRNA Plasmid (m): sc-36381-SH and Ran BP-2 shRNA (m) Lentiviral Particles: sc-36381-V.

Molecular Weight of Ran BP-2: 358 kDa.

Positive Controls: Y79 cell lysate: sc-2240 or rat brain extract: sc-2392.

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.

RESEARCH USE

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



Try **Ran BP-2 (D-4): sc-74518**, our highly recommended monoclonal alternative to Ran BP-2 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Ran BP-2 (D-4): sc-74518**.