

# Ran BP-2 (N-20): sc-15442

## 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.

## SOURCE

Ran BP-2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Ran BP-2 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.

Blocking peptide available for competition studies, sc-15442 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Ran BP-2 (N-20) is recommended for detection of Ran BP-2 of mouse, rat and human origin and, to a lesser extent, the RGPD family of proteins of human 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-2 (N-20) is also recommended for detection of Ran BP-2 and, to a lesser extent, the RGPD family of proteins in additional species, including porcine.

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

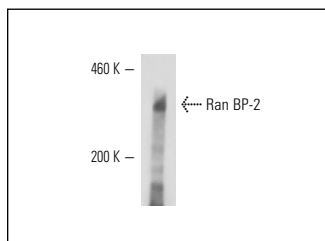
Molecular Weight of Ran BP-2: 358 kDa.

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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Ran BP-2 (N-20): sc-15442. Western blot analysis of Ran BP-2 expression in Y79 whole cell lysate.

## SELECT PRODUCT CITATIONS

- De Keersmaecker, K., et al. 2008. Kinase activation and transformation by Nup214-Abl1 is dependent on the context of the nuclear pore. *Mol. Cell* 31: 134-142.
- Marin, M.P., et al. 2008. Chronic ethanol exposure induces alterations in the nucleocytoplasmic transport in growing astrocytes. *J. Neurochem.* 106: 1914-1928.
- Liu, C., et al. 2010. The interaction of Epac1 and Ran promotes Rap1 activation at the nuclear envelope. *Mol. Cell. Biol.* 30: 3956-3969.
- Roscioli, E., et al. 2012. Importin-β negatively regulates multiple aspects of mitosis including RANGAP1 recruitment to kinetochores. *J. Cell Biol.* 196: 435-450.

## 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.

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Try **Ran BP-2 (D-4): sc-74518**, our highly recommended monoclonal alternative to Ran BP-2 (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Ran BP-2 (D-4): sc-74518**.