

Ran BP-M (K-12): sc-46253

BACKGROUND

The small Ras-related protein Ran, also designated 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). Ran BP-M, also designated Ran-binding protein 9, is involved in the nucleation of microtubule networks and may also act as an adapter protein in the coupling of membrane receptors to intracellular signaling pathways. It has been implicated in the activation of androgen and glucocorticoid receptor. Ran BP-M contains phosphorylated serine residues, and can localize to both the nucleus and the cytoplasm; a phosphorylated form can be associated with the plasma membrane. Ran BP-M is ubiquitously expressed, with highest expression levels in heart, testis, muscle and placenta. The enzymatic activity of the Ran BP-M protein is associated with breast cancer progression and fragile-X mental retardation.

CHROMOSOMAL LOCATION

Genetic locus: RANBP9 (human) mapping to 6p23; Ranbp9 (mouse) mapping to 13 A4.

SOURCE

Ran BP-M (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ran BP-M 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-46253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ran BP-M (K-12) is recommended for detection of Ran BP-M isoform 1 of mouse, rat and 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-M (K-12) is also recommended for detection of Ran BP-M isoform 1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Ran BP-M siRNA (h): sc-45589, Ran BP-M siRNA (m): sc-45590, Ran BP-M shRNA Plasmid (h): sc-45589-SH, Ran BP-M shRNA Plasmid (m): sc-45590-SH, Ran BP-M shRNA (h) Lentiviral Particles: sc-45589-V and Ran BP-M shRNA (m) Lentiviral Particles: sc-45590-V.

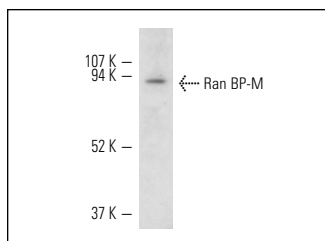
Molecular Weight of Ran BP-M: 91 kDa.

Positive Controls: mouse heart extract: sc-2254 or rat heart extract: sc-2393.

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-M (K-12): sc-46253. Western blot analysis of Ran BP-M expression in rat heart tissue extract.

SELECT PRODUCT CITATIONS

1. Yin, Y.X., et al. 2010. RanBPM contributes to TrkB signaling and regulates brain-derived neurotrophic factor-induced neuronal morphogenesis and survival. *J. Neurochem.* 114: 110-121.

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.



Try **Ran BP-M (F-1): sc-271727** or **Ran BP-M (A-5): sc-271726**, our highly recommended monoclonal alternatives to Ran BP-M (K-12).