

# Mog1p (F-8): sc-398128

## BACKGROUND

The small Ras-related protein, Ran, also called TC4, is a nuclear 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. Mog1p, also known as RanGNRF (Ran guanine nucleotide release factor) or Ran-binding protein MOG1, is a 186 amino acid protein that shuttles between the nucleus and the cytoplasm and is thought to regulate the intracellular trafficking of Ran. Mog1p has been found to be a monomer that interacts with Ran and Na<sup>+</sup> CP type V $\alpha$ , as well as forms a complex with Ran and Ran BP-1. Mog1p exists as four isoforms produced by alternative splicing events, with isoforms one and two being expressed ubiquitously.

## REFERENCES

- Moroianu, J. and Blobel, G. 1995. Protein export from the nucleus requires the GTPase Ran and GTP hydrolysis. *Proc. Natl. Acad. Sci. USA* 92: 4318-4322.
- Zhang, Q.H., et al. 2000. Cloning and functional analysis of cDNAs with open reading frames for 300 previously undefined genes expressed in CD34<sup>+</sup> hematopoietic stem/progenitor cells. *Genome Res.* 10: 1546-1560.
- Steggerda, S.M. and Paschal, B.M. 2000. The mammalian Mog1 protein is a guanine nucleotide release factor for Ran. *J. Biol. Chem.* 275: 23175-23180.
- Marfatia, K.A., et al. 2001. Identification and characterization of the human MOG1 gene. *Gene* 266: 45-56.
- Steggerda, S.M. and Paschal, B.M. 2001. Identification of a conserved loop in Mog1 that releases GTP from Ran. *Traffic* 2: 804-811.

## CHROMOSOMAL LOCATION

Genetic locus: RANGRF (human) mapping to 17p13.1; Rangrf (mouse) mapping to 11 B3.

## SOURCE

Mog1p (F-8) is a mouse monoclonal antibody raised against amino acids 11-88 mapping near the N-terminus of Mog1p of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mog1p (F-8) is available conjugated to agarose (sc-398128 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398128 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398128 PE), fluorescein (sc-398128 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398128 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398128 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398128 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398128 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398128 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398128 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Mog1p (F-8) is recommended for detection of Mog1p of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mog1p siRNA (h): sc-75808, Mog1p siRNA (m): sc-75809, Mog1p shRNA Plasmid (h): sc-75808-SH, Mog1p shRNA Plasmid (m): sc-75809-SH, Mog1p shRNA (h) Lentiviral Particles: sc-75808-V and Mog1p shRNA (m) Lentiviral Particles: sc-75809-V.

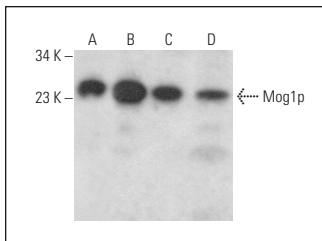
Molecular Weight of Mog1p: 20 kDa.

Positive Controls: Mog1p (m): 293T Lysate: sc-125628, human testis extract: sc-363781 or Hep G2 cell lysate: sc-2227.

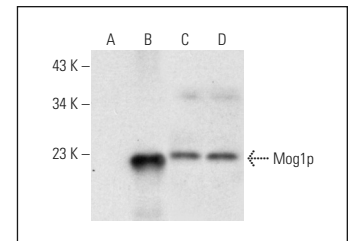
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Mog1p (F-8): sc-398128. Western blot analysis of Mog1p expression in Hep G2 (A), SK-N-SH (B) and RAW 264.7 (C) whole cell lysates and mouse embryonic liver tissue extract (D).



Mog1p (F-8): sc-398128. Western blot analysis of Mog1p expression in non-transfected 293T: sc-117752 (A), mouse Mog1p transfected 293T: sc-125628 (B) and Hep G2 (C) whole cell lysates and human testis tissue extract (D).

## 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) for detailed protocols and support products.