

# SERGEF (H-12): sc-515188

## BACKGROUND

SERGEF (secretion-regulating guanine nucleotide exchange factor), also called DelGEF (deafness locus-associated putative guanine nucleotide exchange factor), is a guanine nucleotide exchange factor which is thought to be involved in secretion pathways. SERGEF associates with Sec5, a protein required for secretion, in a magnesium-dependent manner and is stimulated by the presence of deoxycytidine triphosphate (dCTP) or guanosine triphosphate (GTP). A homolog of RanGEF, SERGEF is localized to the nucleus and cytoplasm and is expressed throughout the body with high expression observed in the brain, placenta and skeletal muscle. SERGEF is a 458 amino acid protein which, upon DNA damage, is phosphorylated by Atm or ATR. Two isoforms exist due to alternative splicing.

## REFERENCES

- Uhlmann, J., et al. 1999. DelGEF, an RCC1-related protein encoded by a gene on chromosome 11p14 critical for two forms of hereditary deafness. *FEBS Lett.* 460: 153-160.
- Sjölander, M., et al. 2002. DelGEF, a homologue of the Ran guanine nucleotide exchange factor RanGEF, binds to the exocyst component Sec5 and modulates secretion. *FEBS Lett.* 532: 211-215.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606051. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Mott, H.R., et al. 2003. Structure of the GTPase-binding domain of Sec5 and elucidation of its Ral binding site. *J. Biol. Chem.* 278: 17053-17059.
- Sjölander, M., et al. 2004. Characterisation of an evolutionary conserved protein interacting with the putative guanine nucleotide exchange factor DelGEF and modulating secretion. *Exp. Cell Res.* 294: 68-76.

## CHROMOSOMAL LOCATION

Genetic locus: SERGEF (human) mapping to 11p15.1; Sergef (mouse) mapping to 7 B4.

## SOURCE

SERGEF (H-12) is a mouse monoclonal antibody raised against amino acids 17-144 mapping within an internal region of SERGEF of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SERGEF (H-12) is available conjugated to agarose (sc-515188 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515188 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515188 PE), fluorescein (sc-515188 FITC), Alexa Fluor<sup>®</sup> 488 (sc-515188 AF488), Alexa Fluor<sup>®</sup> 546 (sc-515188 AF546), Alexa Fluor<sup>®</sup> 594 (sc-515188 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-515188 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-515188 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-515188 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

SERGEF (H-12) is recommended for detection of SERGEF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for SERGEF siRNA (h): sc-96513, SERGEF siRNA (m): sc-153345, SERGEF shRNA Plasmid (h): sc-96513-SH, SERGEF shRNA Plasmid (m): sc-153345-SH, SERGEF shRNA (h) Lentiviral Particles: sc-96513-V and SERGEF shRNA (m) Lentiviral Particles: sc-153345-V.

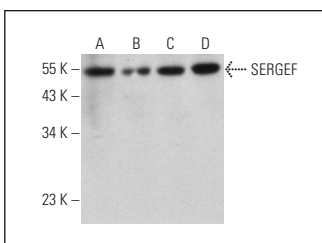
Molecular Weight of SERGEF: 49 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

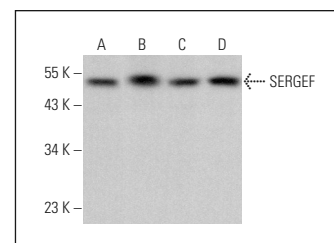
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



SERGEF (H-12): sc-515188. Western blot analysis of SERGEF expression in HeLa (A), MCF7 (B), HT-29 (C) and Hep G2 (D) whole cell lysates.



SERGEF (H-12): sc-515188. Western blot analysis of SERGEF expression in HL-60 (A), C6 (B), U-87 MG (C) and AN3 CA (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](http://www.scbt.com) for detailed protocols and support products.