SERGEF (G-12): sc-109022

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BIOTECHNOLOGY

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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

1. Uhlmann, J., Wiemann, S. and Ponstingl, H. 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.

2. Sjölinder, M., Uhlmann, J. and Ponstingl, H. 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.

3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606051. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

4. Mott, H.R., Nietlispach, D., Hopkins, L.J., Mirey, G., Camonis, J.H. and Owen, D. 2003. Structure of the GTPase-binding domain of Sec5 and elucidation of its Ral binding site. J. Biol. Chem. 278: 17053-17059.

5. Sjölinder, M., Uhlmann, J. and Ponstingl, H. 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 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SERGEF 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-109022 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

SERGEF (G-12) is recommended for detection of SERGEF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SERGEF (G-12) is also recommended for detection of SERGEF in additional species, including bovine.

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.

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) 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.

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.