

SERGEF (2261C3a): sc-81078

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. Sjölander, 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. Sjölander, 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.

SOURCE

SERGEF (2261C3a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of SERGEF of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

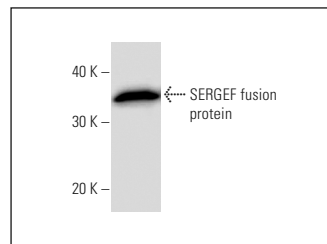
APPLICATIONS

SERGEF (2261C3a) is recommended for detection of SERGEF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

Molecular Weight of SERGEF: 49 kDa.

DATA



SERGEF (2261C3a): sc-81078. Western Blot analysis of human recombinant SERGEF fusion protein.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.