

AP-1 μ 2 siRNA (h): sc-72509

BACKGROUND

AP-1 μ 2 (adaptor-related protein complex 1, μ 2 subunit), also known as MU1B, HSMU1B or AP1 μ 2, is a 423 amino acid protein that localizes to both the Golgi apparatus, as well as to the membrane of clathrin-coated vesicles, and contains one μ homology domain. Existing as two alternatively spliced isoforms, AP-1 μ 2 functions as a subunit of the heterotetrameric adaptor-related protein complex 1 (AP-1), which plays a role in protein sorting in endosomes and in the *trans*-Golgi network. Specifically, the AP-1 complex mediates the recruitment of clathrin to membranes and also regulates the recognition of sorting signals within transmembrane cargo molecules. The affinity of AP-1 μ 2 for sorting signals is increased upon phosphorylation. Human AP-1 μ 2 shares 97% sequence identity with its mouse counterpart, suggesting a conserved role between species.

REFERENCES

1. Fölsch, H., et al. 1999. A novel clathrin adaptor complex mediates basolateral targeting in polarized epithelial cells. *Cell* 99: 189-198.
2. Nakatsu, F., et al. 1999. Genomic structure and chromosome mapping of the genes encoding clathrin-associated adaptor medium chains μ 1A (AP-1 μ 1) and μ 1B (AP-1 μ 2). *Cytogenet. Cell Genet.* 87: 53-58.
3. Ohno, H., et al. 1999. μ 1B, a novel adaptor medium chain expressed in polarized epithelial cells. *FEBS Lett.* 449: 215-220.
4. Sugimoto, H., et al. 2002. Differential recognition of tyrosine-based basolateral signals by AP-1B subunit μ 1B in polarized epithelial cells. *Mol. Biol. Cell* 13: 2374-2382.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607309. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Roeth, J.F., et al. 2004. HIV-1 Nef disrupts MHC-I trafficking by recruiting AP-1 to the MHC-I cytoplasmic tail. *J. Cell Biol.* 167: 903-913.
7. Hirano, T., et al. 2006. Luteolin, a flavonoid, inhibits AP-1 activation by basophilic. *Biochem. Biophys. Res. Commun.* 340: 1-7.

CHROMOSOMAL LOCATION

Genetic locus: AP1M2 (human) mapping to 19p13.2.

PRODUCT

AP-1 μ 2 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AP-1 μ 2 shRNA Plasmid (h): sc-72509-SH and AP-1 μ 2 shRNA (h) Lentiviral Particles: sc-72509-V as alternate gene silencing products.

For independent verification of AP-1 μ 2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72509A, sc-72509B and sc-72509C.

RESEARCH USE

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCL, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

AP-1 μ 2 siRNA (h) is recommended for the inhibition of Ap-1 μ 2 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Ap-1 μ 2 gene expression knockdown using RT-PCR Primer: AP-1 μ 2 (h)-PR: sc-72509-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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