SANTA CRUZ BIOTECHNOLOGY, INC.

# AP-1μ2 siRNA (m): sc-72510

## BACKGROUND

AP-1μ2 (adaptor-related protein complex 1, μ 2 subunit), also known as MU1B, HSMU1B or AP1μ2, 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-1μ2 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-1μ2 for sorting signals is increased upon phosphorylation. Human AP-1μ2 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 μ1A (AP-1μ1) and μ1B (AP-1μ2). Cytogenet. Cell Genet. 87: 53-58.
3. Ohno, H., et al. 1999. μ1B, 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 μ1B 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 basophils. Biochem. Biophys. Res. Commun. 340: 1-7.


## CHROMOSOMAL LOCATION

Genetic locus: Ap1m2 (mouse) mapping to 9 A3.

## PRODUCT

AP-1μ2 siRNA (m) 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 μM solution once resuspended using protocol below. Suit-able for 50-100 transfections. Also see AP-1μ2 shRNA Plasmid (m): sc-72510-SH and AP-1μ2 shRNA (m) Lentiviral Particles: sc-72510-V as alternate gene silencing products.

For independent verification of AP-1μ2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72510A, sc-72510B and sc-72510C.

## 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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

AP-1μ2 siRNA (m) is recommended for the inhibition of AP-1μ2 expression in mouse 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 µM in 66 µl. 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-1μ2 gene expression knockdown using RT-PCR Primer: AP-1μ2 (m)-PR: sc-72510-PR (20 µl). 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.