

# APO siRNA (m): sc-141155

## BACKGROUND

Amino peptidases comprise a family of enzymatic proteins that are widely distributed in both eukaryotes and prokaryotes and function to catalyze the removal of amino acids from the N-termini of proteins. APO (aminopeptidase O), also known as ONPEP or C9orf3 (chromosome 9 open reading frame 3), is an 819 amino acid protein that localizes to the cytoplasm and belongs to the peptidase M1 family. Expressed predominately in testis, liver, pancreas, heart and placenta and present at lower levels in kidney, brain and lung, APO uses zinc as a cofactor to catalyze the hydrolysis of amino acids from target substrates, possibly playing a role in the processing of bioactive peptides. Multiple isoforms of APO exist due to alternative splicing events.

## REFERENCES

1. Taylor, A. 1993. Aminopeptidases: structure and function. *FASEB J.* 7: 290-298.
2. Foulon, T., et al. 1999. Aminopeptidase B (EC 3.4.11.6). *Int. J. Biochem. Cell Biol.* 31: 747-750.
3. Díaz-Perales, A., et al. 2005. Identification of human aminopeptidase O, a novel metalloprotease with structural similarity to aminopeptidase B and leukotriene A4 hydrolase. *J. Biol. Chem.* 280: 14310-14317.
4. Teranishi, J., et al. 2008. Evaluation of role of angiotensin III and aminopeptidases in prostate cancer cells. *Prostate* 68: 1666-1673.
5. Moore, H.E., et al. 2009. Aminopeptidase inhibition as a targeted treatment strategy in myeloma. *Mol. Cancer Ther.* 8: 762-770.

## CHROMOSOMAL LOCATION

Genetic locus: 201011101Rik (mouse) mapping to 13 B3.

## PRODUCT

APO 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see APO shRNA Plasmid (m): sc-141155-SH and APO shRNA (m) Lentiviral Particles: sc-141155-V as alternate gene silencing products.

For independent verification of APO (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-141155A, sc-141155B and sc-141155C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

APO siRNA (m) is recommended for the inhibition of APO 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  $\mu$ M in 66  $\mu$ 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 APO gene expression knockdown using RT-PCR Primer: APO (m)-PR: sc-141155-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## 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.