

APEH siRNA (h): sc-78303

BACKGROUND

APEH (Acyl-peptide hydrolase), also known as APH, OPH or ACPH, is a 732 amino acid cytoplasmic protein that exists as a homotetramer and functions to catalyze the hydrolysis of N-terminal acetylated amino acids from small acetylated peptides. Once hydrolyzed from the target peptide, the acetyl amino acid is further processed by an aminoacylase to produce acetate and a free amino acid. The gene encoding human APEH maps to a region on chromosome 3 that is deleted in various types of cancers, including renal cell carcinoma and small cell lung carcinoma, suggesting that APEH may be involved in tumor transformation events. Chromosome 3 is made up of about 214 million bases encoding over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B.

REFERENCES

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3. Scaloni, A., et al. 1992. Acylpeptide hydrolase: inhibitors and some active site residues of the human enzyme. *J. Biol. Chem.* 267: 3811-3818.
4. Kohno, T., et al. 1993. Deletion mapping of chromosome 3p in human uterine cervical cancer. *Oncogene* 8: 1825-1832.
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6. Scaloni, A., et al. 1999. Structural investigations on human erythrocyte acylpeptide hydrolase by mass spectrometric procedures. *J. Protein Chem.* 18: 349-360.
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CHROMOSOMAL LOCATION

Genetic locus: APEH (human) mapping to 3p21.31.

PRODUCT

APEH 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 APEH shRNA Plasmid (h): sc-78303-SH and APEH shRNA (h) Lentiviral Particles: sc-78303-V as alternate gene silencing products.

For independent verification of APEH (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-78303A, sc-78303B and sc-78303C.

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

APEH siRNA (h) is recommended for the inhibition of APEH 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.

GENE EXPRESSION MONITORING

APEH (G-6): sc-376612 is recommended as a control antibody for monitoring of APEH gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor APEH gene expression knockdown using RT-PCR Primer: APEH (h)-PR: sc-78303-PR (20 μ 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 for detailed protocols and support products.