SANTA CRUZ BIOTECHNOLOGY, INC.

APS siRNA (h): sc-29710

BACKGROUND

APS (adapter molecule containing PH and SH2 domains), SH2-B and Lnk compose a family of adapter proteins, which contain a pleckstrin homology (PH) domain, an SH2 domain and a tyrosine phosphorylation site. Stimulation of B cell receptor (BCR) or T cell receptor (TCR) results in the phosphorylation of the immunoreceptor tyrosine-based activation motif (ITAM) of BCR, TCR and several substrates. APS, SH2-B and Lnk may bind to the ITAM domain of BCR and TCR. Lnk is tyrosine phosphorylated in response to TCR stimulation and APS has been shown to be tyrosine phosphorylated in response to BCR stimulation.

REFERENCES

1. Osborne, M.A., et al. 1995. The yeast tribrid system—genetic detection of *trans*-phosphorylated ITAM-SH2-interactions. Biotechnology 13: 1474-1478.
2. Daeron, M., et al. 1995. The same tyrosine-based inhibition motif, in the intracytoplasmic domain of Fc γ RIIB, regulates negatively BCR-, TCR-, and FcR-dependent cell activation. Immunity 3: 635-646.
3. Huang, X., et al. 1995. Cloning and characterization of Lnk, a signal transduction protein that links T-cell receptor activation signal to phospholipase C γ1, Grb2, and phosphatidylinositol 3-kinase. Proc. Natl. Acad. Sci. USA 92: 11618-11622.
4. Yokouchi, M., et al. 1997. Cloning and characterization of APS, an adaptor molecule containing PH and SH2 domains that is tyrosine phosphoryalted upon B-cell receptor stimulation. Oncogene 15: 7-15.
5. Takaki, S., et al. 1997. Characterization of Lnk. An adaptor protein expressed in lymphocytes. J. Biol. Chem. 272: 14562-14570.

CHROMOSOMAL LOCATION

Genetic locus: SH2B2 (human) mapping to 7q22.1.

PRODUCT

APS 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see APS shRNA Plasmid (h): sc-29710-SH and APS shRNA (h) Lentiviral Particles: sc-29710-V as alternate gene silencing products.

For independent verification of APS (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-29710A, sc-29710B and sc-29710C.

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.

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

APS siRNA (h) is recommended for the inhibition of APS 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 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 APS gene expression knockdown using RT-PCR Primer: APS (h)-PR: sc-29710-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.