SANTA CRUZ BIOTECHNOLOGY, INC.

COP siRNA (h): sc-105233

BACKGROUND

COP, also known as COP1, CARD16 (caspase recruitment domain-containing protein 16) or pseudo-ICE (pseudo interleukin-1 β converting enzyme), is a 197 amino acid protein that contains one caspase recruitment domain (CARD). Widely expressed, COP is present in high levels in placenta, spleen, lymph node and bone marrow. Functioning as a caspase inhibitor, COP regulates the activation of caspase-1 and caspase-4, and may inhibit caspase-1 mediated cell death. The inhibition of caspase-1 mediated cell death may lead to aberrant caspase-1-mediated pathogenesis in Huntington's disease; COP is typically down-regulated in patients with Huntington disease. Interacting directly with RICK and CARD 8, COP may also induce NFκB activation during pro-inflammatory cytokine responses. The gene encoding COP maps to human chromosome 11q22.3.

REFERENCES

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2. Lee, S.H., Stehlik, C. and Reed, J.C. 2001. COP, a caspase recruitment domain-containing protein and inhibitor of caspase-1 activation processing. J. Biol. Chem. 276: 34495-34500.
3. Razmara, M., Srinivasula, S.M., Wang, L., Poyet, J.L., Geddes, B.J., DiStefano, P.S., Bertin, J. and Alnemri, E.S. 2002. CARD 8 protein, a new CARD family member that regulates caspase-1 activation and apoptosis. J. Biol. Chem. 277: 13952-13958.
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5. Wang, X., Narayanan, M., Bruey, J.M., Rigamonti, D., Cattaneo, E., Reed, J.C. and Friedlander, R.M. 2006. Protective role of COP in Rip2/caspase-1/caspase-4-mediated HeLa cell death. Biochim. Biophys. Acta 1762: 742-754.

CHROMOSOMAL LOCATION

Genetic locus: CARD16 (human) mapping to 11q22.3.

PRODUCT

COP siRNA (h) is a pool of 2 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 COP shRNA Plasmid (h): sc-105233-SH and COP shRNA (h) Lentiviral Particles: sc-105233-V as alternate gene silencing products.

For independent verification of COP (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-105233A and sc-105233B.

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

COP siRNA (h) is recommended for the inhibition of COP 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 COP gene expression knockdown using RT-PCR Primer: COP (h)-PR: sc-105233-PR (20 µl). 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.