SANTA CRUZ BIOTECHNOLOGY, INC.

$FLIP_{S/L}$ siRNA (h): sc-35388

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The Power to Question

BACKGROUND

FLIP (FLICE inhibitory protein) is expressed as both long and short forms and is involved in the regulation of apoptosis. The short form of FLIP contains two death effector domains homologous to the death effector domain of the FAS-associating protein FADD. The long form of FLIP, which shares significant homology with the cysteine protease FLICE, contains an additional caspase-like domain, but lacks a catalytic active site and lacks the residues that form the substrate binding pocket in most caspases. FLIP has been designated by independent groups as Casper, I-FLICE, CLARP, FLAME-1 and MRIT. Although its exact role is still being elucidated, FLIP appears to be an important factor in the regulation of apoptosis downstream of all known death receptors.

CHROMOSOMAL LOCATION

Genetic locus: CFLAR (human) mapping to 2q33.1.

PRODUCT

$FLIP_{S/L}$ siRNA (h) is a pool of 4 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 $FLIP_{S/L}$ shRNA Plasmid (h): sc-35388-SH and $FLIP_{S/L}$ shRNA (h) Lentiviral Particles: sc-35388-V as alternate gene silencing products.

For independent verification of $FLIP_{S/L}$ (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-35388A, sc-35388B, sc-35388C and sc-35388D.

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

$FLIP_{S/L}$ siRNA (h) is recommended for the inhibition of $FLIP_{S/L}$ 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.

GENE EXPRESSION MONITORING

$FLIP_{S/L}$ (G-11): sc-5276 is recommended as a control antibody for monitoring of $FLIP_{S/L}$ 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor $FLIP_{S/L}$ gene expression knockdown using RT-PCR Primer: $FLIP_{S/L}$ (h)-PR: sc-35388-PR (20 µl, 326 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

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3. Pajak, B., et al. 2009. Sodium butyrate sensitizes human colon adenocarcinoma COLO 205 cells to both intrinsic and TNF-α-dependent extrinsic apoptosis. Apoptosis 14: 203-217.
4. Murtaza, I., et al. 2009. Suppression of cFLIP by lupeol, a dietary triterpene, is sufficient to overcome resistance to TRAIL-mediated apoptosis in chemoresistant human pancreatic cancer cells. Cancer Res. 69: 1156-1165.
5. Carlisi, D., et al. 2009. The histone deacetylase inhibitor suberoylanilide hydroxamic acid sensitises human hepatocellular carcinoma cells to TRAIL-induced apoptosis by TRAIL-DISC activation. Eur. J. Cancer 45: 2425-2438.
6. Fan, S., et al. 2010. Scatter factor protects tumor cells against apoptosis caused by TRAIL. Anticancer Drugs 21: 10-24.
7. Melki, M.T., et al. 2010. Escape of HIV-1-infected dendritic cells from TRAIL-mediated NK cell cytotoxicity during NK-DC cross-talk—a pivotal role of HMGB1. PLoS Pathog. 6: e1000862.
8. Yu, Z., et al. 2011. β-elemene piperazine derivatives induce apoptosis in human leukemia cells through downregulation of c-FLIP and generation of Ros. PLoS ONE 6: e15843.
9. Jing, Z.T., et al. 2019. Akt activator SC79 protects hepatocytes from TNF-α-mediated apoptosis and alleviates d-Gal/LPS-induced liver injury. Am. J. Physiol. Gastrointest. Liver Physiol. 316: G387-G396.
10. Park, S.H., et al. 2019. *Codium fragile* F2 sensitize colorectal cancer cells to TRAIL-induced apoptosis via c-FLIP ubiquitination. Biochem. Biophys. Res. Commun. 508: 1-8.
11. Xiaohong, W., et al. 2019. CFLAR is a critical regulator of cerebral ischaemia-reperfusion injury through regulating inflammation and endoplasmic reticulum (ER) stress. Biomed. Pharmacother. 117: 109155.

RESEARCH USE

For research use only, not for use in diagnostic procedures.