**BACKGROUND**

The baculovirus protein p35 inhibits virally-induced apoptosis of invertebrate and mammalian cells and may function to impair the clearing of virally infected cells by the immune system of the host. This is accomplished at least in part by the ability of p35 to block both TNF- and Fas-mediated apoptosis through the inhibition of the ICE family of serine proteases. Two mammalian homologs of baculovirus p35, referred to as inhibitor of apoptosis protein (IAP) 1 and 2, share an amino-terminal baculovirus IAP repeat (BIR) motif and a carboxy-terminal RING finger. Although the c-IAPs do not directly associate with the TNF receptor (TNF-R), they efficiently block TNF-mediated apoptosis through their interaction with the downstream TNF-R effectors, TRAF1 and TRAF2. Additional IAP family members include ILP (for IAP-like protein) and survivin. ILP inhibits activated caspase-3, leading to the resistance of Fas-mediated apoptosis. Survivin (also designated TIAP) is expressed during the G2/M phase of the cell cycle and associates with microtubules of the mitotic spindle. Increased caspase-3 activity is detected when a disruption of survivin-microtubule interactions occurs.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: BIRC5 (human) mapping to 17q25.3.

**PRODUCT**

survivin siRNA (h) is a target-specific 19-25 nt siRNA 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 survivin shRNA Plasmid: sc-29499-SH and survivin shRNA (h) Lentiviral Particles: sc-29499-V as alternate gene silencing 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**

survivin siRNA (h) is recommended for the inhibition of survivin 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. Fluoresein 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**

survivin (D-8): sc-17779 is recommended as a control antibody for monitoring of survivin 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 survivin gene expression knockdown using RT-PCR Primer: survivin (h)-PR: sc-29499-PR (20 µl, 434 bp). Annealing temperature for the primers should be 55-60°C. For optimal RT-PCR efficiency, Santa Cruz Biotechnology's RT-PCR REAGENTS include: sc-29528 (0.3 ml), sc-29529 (20 µl, 50-100 bps) or sc-29527 (1.5 ml), dilution range 1:100-1:1000. Semi-quantitative RT-PCR may be performed to monitor survivin gene expression knockdown by Western Blotting (starting dilution 1:50, dilution range 1:50-1:500).

**DATA**

survivin siRNA (h): sc-29499. Western blot analysis of survivin expression in non-transfected control (A) and survivin siRNA transfected (B) HeLa cells. Blot probed with survivin (D-8): sc-17779. Actin (I-19): sc-1616 used as specificity and loading control.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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