

ISG20L1 siRNA (h): sc-89904

BACKGROUND

ISG20L1 (apoptosis enhancing nuclease), also known as AEN or pp12744, is a 325 amino acid protein that contains one exonuclease domain and shares significant homology with various exonucleases. Encoded by a gene that maps to human chromosome 15q26.1, ISG20L1 localizes predominantly to nucleolus where it translocates to nucleoplasm upon apoptosis induction. Up-regulated by p53 in response to ionizing radiation and DNA-damaging agents, ISG20L1 requires phosphorylation of p53 at Ser 15 for effective induction. ISG20L1 digests double-stranded DNA to form single-stranded DNA and amplifies DNA damage signals, thereby mediating and enhancing p53-induced apoptosis. Existing as two alternatively spliced isoforms, ISG20L1 exhibits exonuclease activity against single- and double-stranded DNA and RNA and also participates in nucleic acid binding.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: AEN (human) mapping to 15q26.1.

PRODUCT

ISG20L1 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 ISG20L1 shRNA Plasmid (h): sc-89904-SH and ISG20L1 shRNA (h) Lentiviral Particles: sc-89904-V as alternate gene silencing products.

For independent verification of ISG20L1 (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-89904A, sc-89904B and sc-89904C.

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

ISG20L1 siRNA (h) is recommended for the inhibition of ISG20L1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ISG20L1 gene expression knockdown using RT-PCR Primer: ISG20L1 (h)-PR: sc-89904-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.