SANTA CRUZ BIOTECHNOLOGY, INC.

Eos siRNA (m): sc-146199

BACKGROUND

Ikaros family members, including Ikaros and Helios, are nuclear factors that colocalize with DNA replication machinery components in higher-order chromatin structures and respond to signaling events, such as T-cell activation. Helios and Ikaros bind to similar DNA sequences and they function as hemopoietic-specific transcription factors. Members of the Ikaros family contain zinc-finger domains that are involved in DNA-binding and in the formation of homodimers and heterodimers between Ikaros family members. Eos, also known as zinc finger protein Ikaros 4, is a 585 amino acid transcriptional repressor. Localized to the nucleus, Eos may play a role in the development of the central and peripheral nervous systems. Eos self-associates, forms heterodimers with Ikaros family members and interacts with CtBP2, PU.1 and MITF to repress transcription of cathepsin K and TRAP promoters. Eos is expressed at low levels in kidney, thymus, liver and heart, and at high levels in skeletal muscle.

REFERENCES

1. Honma, Y., et al. 1999. Eos: a novel member of the Ikaros gene family expressed predominantly in the developing nervous system. FEBS Lett. 447: 76-80.
2. Perdomo, J., et al. 2000. Eos and pegasus, two members of the Ikaros family of proteins with distinct DNA binding activities. J. Biol. Chem. 275: 38347-38354.
3. Perdomo, J., et al. 2002. The Ikaros family protein Eos associates with C-terminal-binding protein corepressors. Eur. J. Biochem. 269: 5885-5892.
4. Koipally, J., et al. 2002. A molecular dissection of the repression circuitry of Ikaros. J. Biol. Chem. 277: 27697-27705.

CHROMOSOMAL LOCATION

Genetic locus: Ikzf4 (mouse) mapping to 10 D3.

PRODUCT

Eos siRNA (m) 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 Eos shRNA Plasmid (m): sc-146199-SH and Eos shRNA (m) Lentiviral Particles: sc-146199-V as alternate gene silencing products.

For independent verification of Eos (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-146199A, sc-146199B and sc-146199C.

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

Eos siRNA (m) is recommended for the inhibition of Eos expression in mouse 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 Eos gene expression knockdown using RT-PCR Primer: Eos (m)-PR: sc-146199-PR (20 µl, 589 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.