

EZ1 siRNA (m): sc-144988

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. As a member of the Krüppel C₂H₂-type zinc-finger protein family, EZ1, also known as ZNF467 (zinc finger protein 467) or Zfp467, is a 595 amino acid nuclear protein that contains 12 C₂H₂-type zinc fingers. EZ1 interacts with Stat3, thereby keeping it in the nucleus and enhancing Stat3 activity. Involved in transcriptional regulation, EZ1 transactivates several promoters including c-Fos and OSM. EZ1 is considered a novel cargo protein for importin-7 and is able to perform a nucleocytoplasmic shuttling mechanism that is mediated by importin-7-dependent nuclear localization and CRM1-independent nuclear export.

REFERENCES

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4. Marg, A., et al. 2004. Nucleocytoplasmic shuttling by nucleoporins Nup153 and Nup214 and CRM1-dependent nuclear export control the subcellular distribution of latent Stat1. *J. Cell Biol.* 165: 823-833.
5. Kumar, S., et al. 2006. Intracellular localization and nucleocytoplasmic trafficking of steroid receptors: an overview. *Mol. Cell. Endocrinol.* 246: 147-156.
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CHROMOSOMAL LOCATION

Genetic locus: Zfp467 (mouse) mapping to 6 B2.3.

PRODUCT

EZ1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see EZ1 shRNA Plasmid (m): sc-144988-SH and EZ1 shRNA (m) Lentiviral Particles: sc-144988-V as alternate gene silencing products.

For independent verification of EZ1 (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-144988A, sc-144988B and sc-144988C.

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

EZ1 siRNA (m) is recommended for the inhibition of EZ1 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 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 EZ1 gene expression knockdown using RT-PCR Primer: EZ1 (m)-PR: sc-144988-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.