

TSPO2 siRNA (h): sc-95158

BACKGROUND

TSPO2 (translocator protein 2), also known as peripheral-type benzodiazepine receptor-like protein 1 or BZRLP1, is a 170 amino acid multi-pass membrane protein of the endoplasmic reticulum that belongs to the TspO/BZRP family. TSPO2 contains a C-terminal region that binds cholesterol and redistributes it during erythropoiesis, and may therefore influence erythrocyte maturation. Existing as two alternatively spliced isoforms, TSPO2 is encoded by a gene that maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, maple syrup urine disease, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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3. Edelmann, L., et al. 2001. Maple syrup urine disease: identification and carrier-frequency determination of a novel founder mutation in the Ashkenazi Jewish population. *Am. J. Hum. Genet.* 69: 863-868.
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6. Fan, J., et al. 2009. Translocator protein 2 is involved in cholesterol redistribution during erythropoiesis. *J. Biol. Chem.* 284: 30484-30497.
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CHROMOSOMAL LOCATION

Genetic locus: TSPO2 (human) mapping to 6p21.1.

PROTOCOLS

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

PRODUCT

TSPO2 siRNA (h) is a pool of 2 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 TSPO2 shRNA Plasmid (h): sc-95158-SH and TSPO2 shRNA (h) Lentiviral Particles: sc-95158-V as alternate gene silencing products.

For independent verification of TSPO2 (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-95158A and sc-95158B.

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

TSPO2 siRNA (h) is recommended for the inhibition of TSPO2 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 TSPO2 gene expression knockdown using RT-PCR Primer: TSPO2 (h)-PR: sc-95158-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.