

## JRK siRNA (h): sc-77720

### BACKGROUND

JRK (jerky protein homolog) is also known as JH8 and is a 520 amino acid ortholog of the mouse Jerky protein. JRK is thought to translocate from the nucleolus to many nuclear foci during the S phase and G<sub>2</sub> phase of the cell cycle. During mitosis, JRK is localized primarily to the cytoplasm, but may also be present as alternatively spliced isoforms that may be found in several other locations within the cell. The gene encoding JRK maps to human chromosome 8q24.3 and shares a locus with genes that are involved in the pathogenesis of Childhood Absence Epilepsy (CAE), suggesting that JRK may be associated with the development of CAE.

### REFERENCES

1. Morita, R., et al. 1998. JH8, a gene highly homologous to the mouse jerky gene, maps to the region for childhood absence epilepsy on 8q24. *Biochem. Biophys. Res. Commun.* 248: 307-314.
2. Morita, R., et al. 1999. Exclusion of the JRK/JH8 gene as a candidate for human childhood absence epilepsy mapped on 8q24. *Epilepsy Res.* 37: 151-158.
3. Moore, T., et al. 2001. Polymorphism analysis of JRK/JH8, the human homologue of mouse jerky, and description of a rare mutation in a case of CAE evolving to JME. *Epilepsy Res.* 46: 157-167.
4. Liu, W., et al. 2002. Jerky, a protein deficient in a mouse epilepsy model, is associated with translationally inactive mRNA in neurons. *J. Neurosci.* 22: 176-182.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603210. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Waldron, R., et al. 2004. Complex regulation and nuclear localization of JRK protein. *Biochem. Soc. Trans.* 32: 920-923.

### CHROMOSOMAL LOCATION

Genetic locus: JRK (human) mapping to 8q24.3.

### PRODUCT

JRK 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 JRK shRNA Plasmid (h): sc-77720-SH and JRK shRNA (h) Lentiviral Particles: sc-77720-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

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

### GENE EXPRESSION MONITORING

JRK (E-9): sc-398356 is recommended as a control antibody for monitoring of JRK 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor JRK gene expression knockdown using RT-PCR Primer: JRK (h)-PR: sc-77720-PR (20 µl). 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](http://www.scbt.com) for detailed protocols and support products.