SANTA CRUZ BIOTECHNOLOGY, INC.

SAPAP3 siRNA (m): sc-37382

BACKGROUND

Members of the postsynaptic density-95 (PSD-95)/SAP90 family of membrane-associated guanylate kinase (MAGUK) proteins function as multimodular scaffolds that organize protein-signaling complexes at neuronal synapses. SAPAP3 (PSD-95/SAP90-binding protein 3), also known as DLGAP3 (disks large-associated protein 3) or DAP3, is a 979 amino acid protein that belongs to the SAPAP family of PSD-95/SAP90-associated proteins. Localized to the cell junction, as well as to the peripheral membrane and the cell synapse, SAPAP3 is thought to play a role in the organization of neuronal cell signaling and synapses, and may also function as an adaptor protein, possibly linking ion channels with the cytoskeleton.

REFERENCES

1. Takeuchi, M., et al. 1997. SAPAPs. A family of PSD-95/SAP90-associated proteins localized at postsynaptic density. J. Biol. Chem. 272: 11943-11951.
2. Boeckers, T.M., et al. 1999. Proline-rich synapse-associated proteins ProSAP1 and ProSAP2 interact with synaptic proteins of the SAPAP/GKAP family. Biochem. Biophys. Res. Commun. 264: 247-252.
3. Bongiorno-Borbone, L., et al. 2005. FAK and PYK2 interact with SAP90/PSD-95-associated protein-3. Biochem. Biophys. Res. Commun. 337: 641-646.
4. Welch, J.M., et al. 2007. Cortico-striatal synaptic defects and OCD-like behaviours in SAPAP3-mutant mice. Nature 448: 894-900.
5. Wu, C., et al. 2007. Systematic identification of SH3 domain-mediated human protein-protein interactions by peptide array target screening. Proteomics 7: 1775-1785.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611413. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: Dlgap3 (mouse) mapping to 4 D2.2.

PRODUCT

SAPAP3 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 SAPAP3 shRNA Plasmid (m): sc-37382-SH and SAPAP3 shRNA (m) Lentiviral Particles: sc-37382-V as alternate gene silencing products.

For independent verification of SAPAP3 (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-37382A, sc-37382B and sc-37382C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SAPAP3 siRNA (m) is recommended for the inhibition of SAPAP3 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 SAPAP3 gene expression knockdown using RT-PCR Primer: SAPAP3 (m)-PR: sc-37382-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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