SANTA CRUZ BIOTECHNOLOGY, INC.

2B28 siRNA (m): sc-108883

BACKGROUND

MAP (mitogen-activated protein) kinases, also designated stress-activated protein kinases (SAPKs), include p38α (SAPK2a), p38β (SAPK2b), p38γ (SAPK3) and p38δ (SAPK4), and play a significant role in many biological processes, including cell adhesion and spreading, cell differentiation and apoptosis. 2B28, also designated SAPK substrate protein 1 (SAKS1) UBX domain-containing protein 1 (UBXN1), is a 297 amino acid protein that contains one UBA domain and one UBX domain and is a substrate of p38γ and p38δ. 2B28 is a component of a complex composed of NGLY1, SAKS1, AMFR, VCP and RAD23B, where it acts as an adapter that directs VCP to polyubiquitinated proteins. 2B28 also interacts with Homer 2, which further suggests role for 2B28 in the regulation of protein degradation by ubiquitin-proteasome systems.

REFERENCES

1. Han, J., et al. 1995. Molecular cloning of human p38 MAP kinase. Biochim. Biophys. Acta 1265: 224-227.
2. Jiang, Y., et al. 1996. Characterization of the structure and function of a new mitogen-activated protein kinase (p38β). J. Biol. Chem. 271: 17920-17926.
3. Soloviev, M.M., et al. 2000. Molecular characterisation of two structurally distinct groups of human homers, generated by extensive alternative splicing. J. Mol. Biol. 295: 1185-1200.
4. McNeill, H., et al. 2004. A novel UBA and UBX domain protein that binds polyubiquitin and VCP and is a substrate for SAPKs. Biochem. J. 384: 391-400.
5. Nishina, H., et al. 2004. Physiological roles of SAPK/JNK signaling pathway. J. Biochem. 136: 123-126.
6. Ishibashi, T., et al. 2005. A novel protein specifically interacting with Homer2 regulates ubiquitin-proteasome systems. J. Biochem. 137: 617-623.
7. Foa, L. and Gasperini, R. 2009. Developmental roles for Homer: more than just a pretty scaffold. J. Neurochem. 108: 1-10.

CHROMOSOMAL LOCATION

Genetic locus: Ubxn1 (mouse) mapping to 19 A.

PRODUCT

2B28 siRNA (m) 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 2B28 shRNA Plasmid (m): sc-108883-SH and 2B28 shRNA (m) Lentiviral Particles: sc-108883-V as alternate gene silencing products.

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

2B28 siRNA (m) is recommended for the inhibition of 2B28 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 2B28 gene expression knockdown using RT-PCR Primer: 2B28 (m)-PR: sc-108883-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.