SANTA CRUZ BIOTECHNOLOGY, INC.

UBXN2B siRNA (m): sc-108896

BACKGROUND

The UBX (ubiquitin regulatory X) domain is an 80 amino acid motif that is usually present on the carboxy-terminus of certain eukaryotic proteins. UBX domain-containing proteins (UBXD), such as FAF1, p33ING1 and D8S2298E, are typically involved in ubiquitin-related processes. UBXD proteins also constitute the largest family of VCP cofactors and are generally involved in substrate recruitment to VCP, as well as regulation of its activity. UBXD2B (UBX domain-containing protein 2B), also known as NSFL1 cofactor p37 and p97 cofactor p37, is a 331 amino acid protein that contains one UBX domain and one SEP domain. UBXN2B is required for ER and Golgi biogenesis and also plays a role in their maintenance during interphase, as well as their reassembly at the end of mitosis. Through interaction with VCP, UBXN2B forms a complex that has membrane fusion activity.

REFERENCES

1. Buchberger, A. 2002. From UBA to UBX: new words in the ubiquitin vocabulary. Trends Cell Biol. 12: 216-221.
2. Dreveny, I., Kondo, H., Uchiyama, K., Shaw, A., Zhang, X. and Freemont, P.S. 2004. Structural basis of the interaction between the AAA ATPase p97/VCP and its adaptor protein p47. EMBO J. 23: 1030-1039.
3. Latterich, M. 2006. p97 adaptor choice regulates organelle biogenesis. Dev. Cell 11: 755-757.
4. Uchiyama, K., Totsukawa, G., Puhka, M., Kaneko, Y., Jokitalo, E., Dreveny, I., Beuron, F., Zhang, X., Freemont, P. and Kondo, H. 2006. p37 is a p97 adaptor required for Golgi and ER biogenesis in interphase and at the end of mitosis. Dev. Cell 11: 803-816.
5. Tang, D., Mar, K., Warren, G. and Wang, Y. 2008. Molecular mechanism of mitotic Golgi disassembly and reassembly revealed by a defined reconstitution assay. J. Biol. Chem. 283: 6085-6094.
6. Kaneko, Y., Tamura, K., Totsukawa, G. and Kondo, H. 2010. Phosphorylation of p37 is important for Golgi disassembly at mitosis. Biochem. Biophys. Res. Commun. 402: 37-41.

CHROMOSOMAL LOCATION

Genetic locus: Ubxn2b (mouse) mapping to 4 A1.

PRODUCT

UBXN2B 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 UBXN2B shRNA Plasmid (m): sc-108896-SH and UBXN2B shRNA (m) Lentiviral Particles: sc-108896-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

UBXN2B siRNA (m) is recommended for the inhibition of UBXN2B 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 UBXN2B gene expression knockdown using RT-PCR Primer: UBXN2B (m)-PR: sc-108896-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.