

UBXD5 siRNA (h): sc-88354

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. UBXD5 (UBX domain-containing protein 5), also known as UBXN10 (UBX domain-containing protein 11), Colorectal tumor-associated antigen COA-1 and Socius, is a 520 amino acid cytoplasmic protein that contains one UBX domain and one SEP domain. UBXD5 is involved in the RND GTPase induced signal transduction pathways, leading to reorganization of the actin cytoskeleton. In colorectal cancer patients, UBXD5 expression stimulates both CD4⁺ and CD8⁺ T-cell responses, suggesting that UBXD5 serves as a useful antigen for immunotherapeutic protocols. There are eight isoforms of UBXD5 that are produced as a result of alternative splicing events.

REFERENCES

1. Katoh, H., et al. 2002. Socius is a novel Rnd GTPase-interacting protein involved in disassembly of actin stress fibers. *Mol. Cell. Biol.* 22: 2952-2964.
2. Buchberger, A. 2002. From UBA to UBX: new words in the ubiquitin vocabulary. *Trends Cell Biol.* 12: 216-221.
3. Maccalli, C., et al. 2003. Identification of a colorectal tumor-associated antigen (COA-1) recognized by CD4⁺ T lymphocytes. *Cancer Res.* 63: 6735-6743.
4. Tateiwa, K., et al. 2005. Socius, a novel binding partner of G_α12/13, promotes the G_α12-induced RhoA activation. *Biochem. Biophys. Res. Commun.* 337: 615-620.
5. Maccalli, C., et al. 2008. Induction of both CD8⁺ and CD4⁺ T-cell-mediated responses in colorectal cancer patients by colon antigen-1. *Clin. Cancer Res.* 14: 7292-7303.

CHROMOSOMAL LOCATION

Genetic locus: UBXN11 (human) mapping to 1p36.11.

PRODUCT

UBXD5 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UBXD5 shRNA Plasmid (h): sc-88354-SH and UBXD5 shRNA (h) Lentiviral Particles: sc-88354-V as alternate gene silencing products.

For independent verification of UBXD5 (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-88354A and sc-88354B.

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

UBXD5 siRNA (h) is recommended for the inhibition of UBXD5 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor UBXD5 gene expression knockdown using RT-PCR Primer: UBXD5 (h)-PR: sc-88354-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.