SANTA CRUZ BIOTECHNOLOGY, INC.

TRIM45 siRNA (h): sc-88455

BACKGROUND

TRIM45 (tripartite motif-containing protein 45, RING finger protein 99) is a 580 amino acid nuclear and cytoplasmic protein. TRIM45 is a member of the TRIM/RBCC family and contains two B box-type zinc fingers, one filamin repeat, and one RING-type zinc finger. Tripartite motif (TRIM) proteins play important roles in a variety of cellular functions including cell proliferation, differentiation, development, oncogenesis, and apoptosis. TRIM45 is believed to act as a transcriptional repressor in mitogen-activated protein kinase signaling pathway and has been found to be expressed in skeletal muscle, brain, heart and pancreas. Overexpression of TRIM45 in COS-7 cells inhibits the transcriptional activities of EIK-1 and AP-1. The gene encoding TRIM45 is located on Chromosome 1p13.1 which is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1.

REFERENCES

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2. Wang, Y., et al. 2004. TRIM45, a novel human RBCC/TRIM protein, inhibits transcriptional activities of EIK-1 and AP-1. Biochem. Biophys. Res. Commun. 323: 9-16.
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4. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
6. Denis, N.J., et al. 2007. Tryptic digestion of ubiquitin standards reveals an improved strategy for identifying ubiquitinated proteins by mass spectrometry. Proteomics 7: 868-874.
7. Kawai, T. and Akira, S. 2011. Regulation of innate immune signalling pathways by the tripartite motif (TRIM) family proteins. EMBO Mol. Med. 3: 513-527.
8. Napolitano, L.M. and Meroni, G. 2012. TRIM family: pleiotropy and diversification through homomultimer and heteromultimer formation. IUBMB Life 64: 64-71.

CHROMOSOMAL LOCATION

Genetic locus: TRIM45 (human) mapping to 1p13.1.

PROTOCOLS

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

PRODUCT

TRIM45 siRNA (h) 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 TRIM45 shRNA Plasmid (h): sc-88455-SH and TRIM45 shRNA (h) Lentiviral Particles: sc-88455-V as alternate gene silencing products.

For independent verification of TRIM45 (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-88455A, sc-88455B and sc-88455C.

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

TRIM45 siRNA (h) is recommended for the inhibition of TRIM45 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 TRIM45 gene expression knockdown using RT-PCR Primer: TRIM45 (h)-PR: sc-88455-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.