SANTA CRUZ BIOTECHNOLOGY, INC.

TRAFD1 siRNA (m): sc-63146

BACKGROUND

TRAFD1 (TRAF-type zinc finger domain containing 1), also known as FLN29, is a novel 582 amino acid protein that acts as a lipopolysaccharide (LPS)- and interferon (IFN)-inducible negative regulator, and may also play a role in endotoxin tolerance. TRAFD1 also interacts with TRAF6 to negatively regulate toll-like receptor (TLR) signaling. TRAFD1 contains one TRAF-type zinc finger and contains multiple phosphoserine and phosphothreonine residues. The gene encoding TRAFD1 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Cao, Z., et al. 1996. TRAF6 is a signal transducer for interleukin-1. Nature 383: 443-446.
2. Delgado Carrasco, J., et al. 2001. Achondrogenesis type II-hypochondrogenesis: radiological features. Case report. An. Esp. Pediatr. 55: 553-557.
3. Yokoyama, T., et al. 2003. A case of Kniest dysplasia with retinal detachment and the mutation analysis. Am. J. Ophthalmol. 136: 1186-1188.
4. Mashima, R., et al. 2005. FLN29, a novel interferon- and LPS-inducible gene acting as a negative regulator of Toll-like receptor signaling. J. Biol. Chem. 280: 41289-41297.
5. Nousiainen, M., et al. 2006. Phosphoproteome analysis of the human mitotic spindle. Proc. Natl. Acad. Sci. USA 103: 5391-5396.
6. Sauvé, S., et al. 2008. NMR assignment of the N-terminal TRAF-like RING zinc finger domain of human FLN29. Biomol. NMR Assign. 2: 33-36.
7. Sanada, T., et al. 2008. FLN29 deficiency reveals its negative regulatory role in the Toll-like receptor (TLR) and retinoic acid-inducible gene I (RIG-I)-like helicase signaling pathway. J. Biol. Chem. 283: 33858-33864.
8. Benussi, D.G., et al. 2009. Trisomy 12p and monosomy 4p: phenotype-genotype correlation. Genet. Test. Mol. Biomarkers 13: 199-204.

CHROMOSOMAL LOCATION

Genetic locus: Trafd1 (mouse) mapping to 5 F.

PRODUCT

TRAFD1 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 TRAFD1 shRNA Plasmid (m): sc-63146-SH and TRAFD1 shRNA (m) Lentiviral Particles: sc-63146-V as alternate gene silencing products.

For independent verification of TRAFD1 (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-63146A, sc-63146B and sc-63146C.

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

TRAFD1 siRNA (m) is recommended for the inhibition of TRAFD1 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 TRAFD1 gene expression knockdown using RT-PCR Primer: TRAFD1 (m)-PR: sc-63146-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.

PROTOCOLS

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