SANTA CRUZ BIOTECHNOLOGY, INC.

TBL1XR1 siRNA (h): sc-106601

BACKGROUND

TBL1XR1 (transducin (β)-like 1 X-linked receptor 1), also known as C21, DC42, IRA1 or TBLR1 (TBL1-related protein 1), is a ubiquitously expressed protein that belongs to the WD repeat EBI family of proteins. Localizing to the cytoplasm and the nucleus, TBL1XR1 contains eight WD repeats, one LisH domain and one F-box-like domain. TBL1XR1 functions as a transcriptional regulator, acting as a component of the co-repressor machinery (NCoR/SMRT complex) that is required for the activation of many transcription factors. Specifically, TBL1XR1 is essential for the recruitment of proteasome machinery and, therefore, the subsequent degradation of co-repressors upon ligand binding. The knockdown of TBL1XR1 inhibits β-catenin-mediated transcription and greatly suppresses the growth of head and neck squamous cell carcinoma cells. This suggests that TBL1XR1 may be a useful target in anti-cancer therapy.

REFERENCES

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3. Tomita, A., et al. 2004. Recruitment of N-CoR/SMRT-TBLR1 corepressor complex by unliganded thyroid hormone receptor for gene repression during frog development. Mol. Cell. Biol. 24: 3337-3346.
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6. Liu, Y., et al. 2007. Identification of genes differentially expressed in human primary lung squamous cell carcinoma. Lung Cancer 56: 307-317.
7. Cadigan, K.M. 2008. Wnt/β-catenin signaling: turning the switch. Dev. Cell 14: 322-323.
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CHROMOSOMAL LOCATION

Genetic locus: TBL1XR1 (human) mapping to 3q26.32.

PRODUCT

TBL1XR1 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 TBL1XR1 shRNA Plasmid (h): sc-106601-SH and TBL1XR1 shRNA (h) Lentiviral Particles: sc-106601-V as alternate gene silencing products.

For independent verification of TBL1XR1 (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-106601A, sc-106601B and sc-106601C.

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

TBL1XR1 siRNA (h) is recommended for the inhibition of TBL1XR1 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.

GENE EXPRESSION MONITORING

TBL1XR1 (L-08): sc-100908 is recommended as a control antibody for monitoring of TBL1XR1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TBL1XR1 gene expression knockdown using RT-PCR Primer: TBL1XR1 (h)-PR: sc-106601-PR (20 µl, 500 bp). 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.