SANTA CRUZ BIOTECHNOLOGY, INC.

# β-TrCP siRNA (h): sc-37178

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*The Power to Question*

## BACKGROUND

β-TrCP (β-tranducin repeats containing protein), also designated E3RSIκB or FWD1, and HOS (homologous to Slimb) are F-box proteins that function as substrate recognition subunits of ubiquitin ligases. HOS and β-TrCP differ in their amino-terminal regions, but exhibit high homology within the F-box and WD40 repeat-containing regions. β-TrCP mediates ubiquitin/proteasome-dependent degradation of CD4 and ubiquitination of various proteins including IκB and β-catenin. HOS has also been shown to regulate the degradation of IκB and β-catenin in a similar manner.

## CHROMOSOMAL LOCATION

Genetic locus: BTRC (human) mapping to 10q24.32.

## PRODUCT

β-TrCP 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 β-TrCP shRNA Plasmid (h): sc-37178-SH and β-TrCP shRNA (h) Lentiviral Particles: sc-37178-V as alternate gene silencing products.

For independent verification of β-TrCP (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-37178A, sc-37178B and sc-37178C.

## 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

β-TrCP siRNA (h) is recommended for the inhibition of β-TrCP expression in humousean 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.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## GENE EXPRESSION MONITORING

β-TrCP (C-6): sc-390629 is recommended as a control antibody for monitoring of β-TrCP 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).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor β-TrCP gene expression knockdown using RT-PCR Primer: β-TrCP (h)-PR: sc-37178-PR (20 µl, 428 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


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3. Xing, J., et al. 2014. Upregulation of Unc-51-like kinase 1 by nitric oxide stabilizes SIRT1, independent of autophagy. PLoS ONE 9: e116165.
4. Koo, J., et al. 2015. mTOR complex 2 stabilizes Mcl-1 protein by suppressing its glycogen synthase kinase 3-dependent and SCF-FBXW7-mediated degradation. Mol. Cell. Biol. 35: 2344-2355.
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7. Zhang, Y., et al. 2017. Inhibition of Mcl-1 enhances Pevonedistat-triggered apoptosis in osteosarcoma cells. Exp. Cell Res. 358: 234-241.
8. Huang, K.F., et al. 2019. Ultraviolet B irradiation induced Nrf2 degradation occurs via activation of TRPV1 channels in human dermal fibroblasts. Free Radic. Biol. Med. 141: 220-232.
9. Park, S.H., et al. 2020. Activating CCT2 triggers Gli-1 activation during hypoxic condition in colorectal cancer. Oncogene 39: 136-150.
10. Lou, Y., et al. 2020. The $SCF^{β\text{-}TrCP}$ E3 ubiquitin ligase regulates immune receptor signaling by targeting the negative regulatory protein TIPE2. J. Immunol. 204: 2122-2132.
11. Wang, N., et al. 2024. FGF12 positively regulates keratinocyte proliferation by stabilizing MDM2 and inhibiting p53 activity in psoriasis. Adv. Sci. E-published.


## PROTOCOLS

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