SANTA CRUZ BIOTECHNOLOGY, INC.

3BP1 siRNA (m): sc-108929

BACKGROUND

3BP1 (SH3 domain-binding protein 1) is a 701 amino acid protein with sequence similarity to the COOH-terminal segment of Bcr. This similarity suggests 3BP1 has GTPase-activating protein (GAP) activity for Rac-related proteins. 3BP1 also binds to the SH3 domains of signal transduction pathway proteins, with preference for SRC-1 and GRB2. 3BP1 has also been found to inhibit PDGF-induced membrane ruffling mediated by Rac. Expressed as two isoforms produced by alternative splicing, 3BP1 contains one BAR domain and one Rho-GAP domain.

REFERENCES

1. Cicchetti, P., et al. 1992. Identification of a protein that binds to the SH3 region of Abl and is similar to Bcr and GAP-Rho. Science 257: 803-806.
2. Zhang, B., et al. 1998. Regulation of RhoA GTP hydrolysis by the GTPase-activating proteins p190, p50RhoGAP, Bcr, and 3BP-1. Biochemistry 37: 5249-5257.
3. Västrik, I., et al. 1999. Sema3A-induced growth-cone collapse is mediated by Rac1 amino acids 17-32. Curr. Biol. 9: 991-998.
4. So, C.W., et al. 2000. The interaction between EEN and Abi-1, two MLL fusion partners, and synaptojanin and dynamin: implications for leukaemogenesis. Leukemia 14: 594-601.
5. Scott, M.P., et al. 2002. Identification of novel SH3 domain ligands for the Src family kinase Hck. Wiskott-Aldrich syndrome protein (WASP), WASP-interacting protein (WIP), and ELMO1. J. Biol. Chem. 277: 28238-28246.

CHROMOSOMAL LOCATION

Genetic locus: Sh3bp1 (mouse) mapping to 15 E1.

PRODUCT

3BP1 siRNA (m) is a target-specific 19-25 nt siRNA 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 3BP1 shRNA Plasmid (m): sc-108929-SH and 3BP1 shRNA (m) Lentiviral Particles: sc-108929-V as alternate gene silencing 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.

PROTOCOLS

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

APPLICATIONS

3BP1 siRNA (m) is recommended for the inhibition of 3BP1 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.

GENE EXPRESSION MONITORING

3BP1 (D-9): sc-376192 is recommended as a control antibody for monitoring of 3BP1 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 3BP1 gene expression knockdown using RT-PCR Primer: 3BP1 (m)-PR: sc-108929-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.