

BCAP siRNA (m): sc-44682

BACKGROUND

B cell adaptor for phosphoinositide 3-kinase (BCAP) is a tyrosine kinase substrate that bridges B cell receptor (BCR) associated kinases to the PIK3 pathway. Syk, Btk or Lyn-dependent tyrosine phosphorylation of BCAP, provides binding sites for the p85 subunit of PIK3. BCAP mRNA is present in mouse spleen, thymus, liver, lung, macrophage and B cell lines. Human BCAP maps to chromosome 10q24.1.

REFERENCES

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- Inabe, K., et al. 2002. Tyrosine phosphorylation of B cell adaptor for phosphoinositide 3-kinase is required for Akt activation in response to CD19 engagement. *Blood* 99: 584-589.
- Yamazaki, T., et al. 2002. Essential immunoregulatory role for BCAP in B cell development and function. *J. Exp. Med.* 195: 535-545.
- Yamazaki, T., et al. 2003. Contribution of BCAP to maintenance of mature B cells through c-Rel. *Nat. Immunol.* 4: 780-786.
- Battersby, A., et al. 2003. Isolation of proteins that interact with the signal transduction molecule Dof and identification of a functional domain conserved between Dof and vertebrate BCAP. *J. Mol. Biol.* 329: 479-493.
- Online Mendelian Inheritance in Man, OMIM[™]. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607942. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- MacFarlane, A.W., et al. 2008. Enhanced NK-cell development and function in BCAP-deficient mice. *Blood* 112: 131-140.
- LocusLink Report (LocusID: 118788). <http://www.ncbi.nlm.nih.gov/LocusLink>

CHROMOSOMAL LOCATION

Genetic locus: Pik3ap1 (mouse) mapping to 19 C3.

PRODUCT

BCAP 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BCAP shRNA Plasmid (m): sc-44682-SH and BCAP shRNA (m) Lentiviral Particles: sc-44682-V as alternate gene silencing products.

For independent verification of BCAP (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-44682A, sc-44682B and sc-44682C.

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.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

BCAP siRNA (m) is recommended for the inhibition of BCAP 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 μ M in 66 μ l. 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

BCAP (E-5): sc-515498 is recommended as a control antibody for monitoring of BCAP 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 BCAP gene expression knockdown using RT-PCR Primer: BCAP (m)-PR: sc-44682-PR (20 μ l, 449 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.