SANTA CRUZ BIOTECHNOLOGY, INC.

BAM32 siRNA (m): sc-60242

BACKGROUND

B cell adapter molecule (BAM32) is also designated dual adapter for phosphotyrosine and 3-phosphotyrosine and 3-phosphoinositide (DAPP1) or B lymphocyte adapter protein. BAM32 is a B cell-associated adapter that is crucial for B cell antigen receptor signaling regulation. BAM32 interacts with PtdIns and PLC γ2 and, upon B cell activation, the protein is phosphorylated on tyrosine residues. It is a mainly cytoplasmic protein that can translocate to the cell membrane after cell stimulation. BAM32, which contains one PH domain and one SH2 domain, is primarily expressed in placenta and lung tissues, but can also be detected in heart, liver, pancreas and brain.

REFERENCES

1. Ferguson, K.M., et al. 2000. Structural basis for discrimination of 3-phosphoinositides by Pleckstrin homology domains. Mol. Cell 6: 373-384.
2. Niiro, H., et al. 2003. Branches of the B cell antigen receptor pathway are directed by protein conduits BAM32 and Carma1. Immunity 19: 637-640.
3. Fournier, E., et al. 2003. The B cell SH2/PH domain-containing adaptor BAM32/DAPP1 is required for T cell-independent II antigen responses. Curr. Biol. 13: 1858-1866.
4. Niiro, H., et al. 2004. The B lymphocyte adaptor molecule of 32 kilodaltons (BAM32) regulates B cell antigen receptor internalization. J. Immunol. 173: 5601-5609.
5. Allam, A., et al. 2004. The adaptor protein BAM32 regulates Rac 1 activation and Actin remodeling through a phosphorylation-dependent mechanism. J. Biol. Chem. 279: 39775-39782.
6. Allam, A., et al. 2005. Role of the adaptor proteins BAM32, TAPP1 and TAPP2 in lymphocyte activation. Immunol. Lett. 97: 7-17.

CHROMOSOMAL LOCATION

Genetic locus: Dapp1 (mouse) mapping to 3 G3.

PRODUCT

BAM32 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 BAM32 shRNA Plasmid (m): sc-60242-SH and BAM32 shRNA (m) Lentiviral Particles: sc-60242-V as alternate gene silencing products.

For independent verification of BAM32 (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-60242A, sc-60242B and sc-60242C.

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 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

BAM32 siRNA (m) is recommended for the inhibition of BAM32 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

BAM32 (4H9): sc-130559 is recommended as a control antibody for monitoring of BAM32 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 BAM32 gene expression knockdown using RT-PCR Primer: BAM32 (m)-PR: sc-60242-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.