SANTA CRUZ BIOTECHNOLOGY, INC.

BAP29 siRNA (m): sc-72610

BACKGROUND

BAP29 (Bcr-associated protein 29), also known as BCAP29 (B-cell receptor-associated protein 29), is a multi-pass membrane protein localizing to the endoplasmic reticulum (ER) and belonging to the BCAP29/BCAP31 family of proteins. It is ubiquitously expressed with predominant expression in brain and testes. BAP29 contains a hydrophobic N-terminus, three transmembrane domains, a coiled-coil region and a C-terminal double-lysine motif that is implicated in vesicular transport. BAP29 exists as a homodimer or as a heterodimer with BAP31 and plays a role in membrane IgD molecule retention in the ER. In addition, the BAP29/BAP31 complex functions as a cargo receptor for MHC class I molecules and is important for recruiting the class I molecules to exit sites of the ER. The BAP29/BAP31 complex is also essential for proper trafficking from the ER to the Golgi.

REFERENCES

1. Kim, K.M., et al. 1994. Two new proteins preferentially associated with membrane immunoglobulin D. EMBO J. 13: 3793-3800.
2. Adachi, T., et al. 1996. The specificity of association of the IgD molecule with the accessory proteins BAP31/BAP29 lies in the IgD transmembrane sequence. EMBO J. 15: 1534-1541.
3. Breckenridge, D.G., et al. 2002. The procaspase-8 isoform, procaspase-8L, recruited to the BAP31 complex at the endoplasmic reticulum. Proc. Natl. Acad. Sci. USA 99: 4331-4336.
4. Schamel, W.W., et al. 2003. A high-molecular-weight complex of membrane proteins BAP29/BAP31 is involved in the retention of membrane-bound IgD in the endoplasmic reticulum. Proc. Natl. Acad. Sci. USA 100: 9861-9866.
5. Paquet, M.E., et al. 2004. BAP29/31 influences the intracellular traffic of MHC class I molecules. J. Immunol. 172: 7548-7555.
6. Ladasky, J.J., et al. 2006. BAP31 enhances the endoplasmic reticulum export and quality control of human class I MHC molecules. J. Immunol. 177: 6172-6181.

CHROMOSOMAL LOCATION

Genetic locus: Bcap29 (mouse) mapping to 12 A3.

PRODUCT

BAP29 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 BAP29 shRNA Plasmid (m): sc-72610-SH and BAP29 shRNA (m) Lentiviral Particles: sc-72610-V as alternate gene silencing products.

For independent verification of BAP29 (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-72610A, sc-72610B and sc-72610C.

RESEARCH USE

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

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

BAP29 siRNA (m) is recommended for the inhibition of BAP29 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

BAP29 (W352): sc-101213 is recommended as a control antibody for monitoring of BAP29 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 BAP29 gene expression knockdown using RT-PCR Primer: BAP29 (m)-PR: sc-72610-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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