



Bag-2 siRNA (m): sc-72601

BACKGROUND

Bag-2 (Bcl-2-associated athanogene-2), also known as Bag family molecular chaperone regulator 2, is a member of the Bag family of proteins and contains the most diverged of the characteristic C-terminal Bag domains. Via their Bag domain, Bag proteins bind with high affinity to the HSP 70/HSC 70 ATPase domain, regulating chaperone activity and apoptosis. Bag-2 is an evolutionarily-conserved cytoplasmic protein with putative N-terminal phosphorylation sites and specifically functions as an HSC 70 co-chaperone. Bag-2 is a major component of the HSC 70/CHIP chaperone-dependent ubiquitin ligase complex and acts to disrupt CHIP-mediated ubiquitylation. In this complex, Bag-2 directly interacts with the ATPase domain of HSC 70 as well as the U-box domain of CHIP and inhibits ubiquitylation by interfering with the association between CHIP and its ubiquitin conjugating enzyme.

REFERENCES

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2. Ueda, K., et al. 2004. Proteomic identification of Bcl2-associated athanogene 2 as a novel MAPK-activated protein kinase 2 substrate. *J. Biol. Chem.* 279: 41815-41821.
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4. Dai, Q., et al. 2005. Regulation of the cytoplasmic quality control protein degradation pathway by Bag-2. *J. Biol. Chem.* 280: 38673-38681.
5. Götz, R., et al. 2005. Bag-1 is essential for differentiation and survival of hematopoietic and neuronal cells. *Nat. Neurosci.* 8: 1169-1178.
6. Wada, S., et al. 2006. A genomewide analysis of genes for the heat shock protein 70 chaperone system in the ascidian *Ciona intestinalis*. *Cell Stress Chaperones* 11: 23-33.
7. Yi, C., et al. 2006. Affinity purification reveals the association of WD40 protein constitutive photomorphogenic 1 with the hetero-oligomeric TCP-1 chaperonin complex in mammalian cells. *Int. J. Biochem. Cell Biol.* 38: 1076-1083.
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CHROMOSOMAL LOCATION

Genetic locus: Bag2 (mouse) mapping to 1 B.

PRODUCT

Bag-2 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 Bag-2 shRNA Plasmid (m): sc-72601-SH and Bag-2 shRNA (m) Lentiviral Particles: sc-72601-V as alternate gene silencing products.

For independent verification of Bag-2 (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-72601A, sc-72601B and sc-72601C.

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

Bag-2 siRNA (m) is recommended for the inhibition of Bag-2 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

Bag-2 (C-6): sc-390107 is recommended as a control antibody for monitoring of Bag-2 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 Bag-2 gene expression knockdown using RT-PCR Primer: Bag-2 (m)-PR: sc-72601-PR (20 μ l). 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.

PROTOCOLS

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