

BAT2 siRNA (h): sc-72612

BACKGROUND

BAT2, also known as G2, is a 2,157 amino acid protein that localizes to both the nucleus and the cytoplasm. Expressed in cell lines of leukemic origin, BAT2 exists as multiple alternatively spliced isoforms and is thought to play a role in the regulation of pre-mRNA splicing. The BAT2 gene maps within a cluster of BAT genes on human chromosome 6 and is implicated in the development of rheumatoid arthritis and Insulin-dependent diabetes mellitus (IDDM). Chromosome 6, on which the BAT2 gene is localized, contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Banerji, J., et al. 1990. A gene pair from the human major histocompatibility complex encodes large proline-rich proteins with multiple repeated motifs and a single ubiquitin-like domain. *Proc. Natl. Acad. Sci. USA* 87: 2374-2378.
2. Hashimoto, M., et al. 1999. Genetic contribution of the BAT2 gene microsatellite polymorphism to the age-at-onset of Insulin-dependent diabetes mellitus. *Hum. Genet.* 105: 197-199.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 142580. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Martinez, A., et al. 2004. Association of the major histocompatibility complex with response to infliximab therapy in rheumatoid arthritis patients. *Arthritis Rheum.* 50: 1077-1082.
5. Schneiders, A., et al. 2005. Antibodies generated by a novel DNA vaccination identify the MHC class III encoded BAT2 polypeptide. *Vaccine* 23: 2540-2550.

CHROMOSOMAL LOCATION

Genetic locus: BAT2 (human) mapping to 6p21.33.

PRODUCT

BAT2 siRNA (h) 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 BAT2 shRNA Plasmid (h): sc-72612-SH and BAT2 shRNA (h) Lentiviral Particles: sc-72612-V as alternate gene silencing products.

For independent verification of BAT2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72612A, sc-72612B and sc-72612C.

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

BAT2 siRNA (h) is recommended for the inhibition of BAT2 expression in human 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

BAT2 (A-10): sc-373747 is recommended as a control antibody for monitoring of BAT2 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 BAT2 gene expression knockdown using RT-PCR Primer: BAT2 (h)-PR: sc-72612-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.