

JAMP siRNA (h): sc-92141

BACKGROUND

JAMP (JNK1-associated membrane protein), also known as JKAMP, medulloblastoma antigen MU-MB-50.4 or HSPC213, is a 326 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum. In response to stress stimuli, such as UV irradiation, JAMP binds and modulates JNK activity, and additionally interacts with RNF5. JAMP may recruit members of the proteasome and endoplasmic reticulum-associated degradation (ERAD) system, thus assisting in the degradation of misfolded endoplasmic reticulum proteins. Existing as five alternatively spliced isoforms, the gene encoding JAMP maps to human chromosome 14q23.1 and mouse chromosome 12 C3. Chromosome 5 contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. Kadoya, T., et al. 2005. JAMP, a Jun N-terminal kinase 1 (JNK1)-associated membrane protein, regulates duration of JNK activity. *Mol. Cell. Biol.* 25: 8619-8630.
2. Tcherpakov, M., et al. 2008. JAMP optimizes ERAD to protect cells from unfolded proteins. *Mol. Biol. Cell* 19: 5019-5028.
3. Ravandi, F., et al. 2009. Superior outcome with hypomethylating therapy in patients with acute myeloid leukemia and high-risk myelodysplastic syndrome and chromosome 5 and 7 abnormalities. *Cancer* 115: 5746-5751.
4. Sazawal, S., et al. 2009. Haematological molecular profile of acute myelogenous leukaemia in India. *Indian J. Med. Res.* 129: 256-261.
5. Tcherpakov, M., et al. 2009. Regulation of endoplasmic reticulum-associated degradation by RNF5-dependent ubiquitination of JNK-associated membrane protein (JAMP). *J. Biol. Chem.* 284: 12099-12109.

CHROMOSOMAL LOCATION

Genetic locus: JKAMP (human) mapping to 14q23.1.

PRODUCT

JAMP 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 JAMP shRNA Plasmid (h): sc-92141-SH and JAMP shRNA (h) Lentiviral Particles: sc-92141-V as alternate gene silencing products.

For independent verification of JAMP (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-92141A, sc-92141B and sc-92141C.

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

JAMP siRNA (h) is recommended for the inhibition of JAMP 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor JAMP gene expression knockdown using RT-PCR Primer: JAMP (h)-PR: sc-92141-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.