

JWA siRNA (m): sc-60875

BACKGROUND

JWA is a four-transmembrane environmental responsive protein which binds to the CC chemokine receptor 5 (CCR5), a major co-receptor for human immunodeficiency virus (HIV). JWA is involved in environmental stress-responsive pathways in K-562 cells, an erythroleukemia cell line derived from patients with chronic myeloid leukemia. Environmental stressors to K-562 cells such as heat shock, a higher temperature than the ideal body temperature of the organism from which the cell line was derived, and oxidative stress, the production of oxygen-centered free radicals, regulate and increase the expression of JWA. This response to environmental stressors suggests similarity of JWA to heat shock protein 70 (HSP 70), which is upregulated by heat stress and toxic chemicals.

REFERENCES

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3. Mao, W.G., et al. 2004. Expressions of Jinducers combined with heat stress in K-562 cells. *Zhonghua Lao Dong Wei Sheng Zhi Ye Bing* 21: 60-63.
4. Schweneker, M., et al. 2005. JM4 is a four-transmembrane protein binding to the CCR5 receptor. *FEBS Lett.* 579: 1751-1758.
5. Chen, R., et al. 2005. JWA—a novel signal pathway in MCF7 and MDA-MB-231 breast carcinoma cells. *J. Toxicol. Environ. Health* 68: 445-456.
6. Shen, Q., et al. 2005. JWA gene in regulating committed differentiation of HL-60 cells induced by ATRA, Ara-C and TPA. *Zhongguo Shi Yan Xue Ye Xue* 13: 804-808.
7. Zhu, T., et al. 2005. Regulation of a novel cell differentiation-associated gene, JWA during oxidative damage in K-562 and MCF7 cells. *J. Biomed. Sci.* 12: 219-227.

CHROMOSOMAL LOCATION

Genetic locus: Arl6ip5 (mouse) mapping to 6 D3.

PRODUCT

JWA 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 JWA shRNA Plasmid (m): sc-60875-SH and JWA shRNA (m) Lentiviral Particles: sc-60875-V as alternate gene silencing products.

For independent verification of JWA (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-60875A, sc-60875B and sc-60875C.

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

JWA siRNA (m) is recommended for the inhibition of JWA 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor JWA gene expression knockdown using RT-PCR Primer: JWA (m)-PR: sc-60875-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.