SANTA CRUZ BIOTECHNOLOGY, INC.

BRAK siRNA (m): sc-141736

BACKGROUND

Breast and kidney-expressed chemokine (BRAK) is a highly selective monocyte chemoattractant. The CXC chemokine BRAK, which is ubiquitously expressed in normal tissue extracts, is absent from many tumor cell lines *in vitro*. BRAK, also known as CXCL14, is involved in the generation of tissue macrophages by recruiting extravasated precursors to fibroblasts, which are known to secrete essential cytokines for macrophage development. The gene encoding BRAK is located on human chromosome 5q31.1.This gene belongs to the cytokine family which encodes secreted proteins involved in immunoregulatory and inflammatory processes. The BRAK protein is structurally related to the CXC (Cys-X-Cys) subfamily of cytokines characterized by two cysteines separated by a single amino acid.

REFERENCES

1. Hromas, R., et al. 1999. Cloning of BRAK, a novel divergent CXC chemokine preferentially expressed in normal versus malignant cells. Biochem. Biophys. Res. Commun. 255: 703-706.
2. Frederick, M.J., et al. 2000. *In vivo* expression of the novel CXC chemokine BRAK in normal and cancerous human tissue. Am. J. Pathol. 156: 1937-1950.
3. Kurth, I., et al. 2001. Monocyte selectivity and tissue localization suggests a role for breast and kidney-expressed chemokine (BRAK) in macrophage development. J. Exp. Med. 194: 855-861.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604186. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Mitsui, G., et al. 2003. Kinetic profiles of sequential gene expressions for chemokines in mice with contact hypersensitivity. Immunol. Lett. 86: 191-197.
6. LocusLink Report (LocusID: 9547). http://www.ncbi.nlm.nih.gov/LocusLink/
7. SWISS-PROT/TrEMBL (O95715). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: Cxcl14 (mouse) mapping to 13 B1.

PRODUCT

BRAK 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 BRAK shRNA Plasmid (m): sc-141736-SH and BRAK shRNA (m) Lentiviral Particles: sc-141736-V as alternate gene silencing products.

For independent verification of BRAK (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-141736A, sc-141736B and sc-141736C.

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 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

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

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor BRAK gene expression knockdown using RT-PCR Primer: BRAK (m)-PR: sc-141736-PR (20 µl). 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.