SANTA CRUZ BIOTECHNOLOGY, INC.

eotaxin siRNA (m): sc-63310

BACKGROUND

Eotaxin (also designated eotaxin-1) is a member of the C-C or β family of chemokines which is characterized by a pair of adjacent cysteine residues. Eotaxin was first purified from the bronchoalveolar lavage fluid of guinea pigs challenged with an aerosol allergen, and serves as a potent chemoattractant for eosinophils. Eosinophilia is a prominent feature of several allergic conditions and is thought to be a central event in maladies such as bronchial asthma, dermatitis, conjunctivitis and possibly inflammatory bowel disease. The cognate eotaxin receptor has been identified. Originally described as mouse orphan receptor (MIP-1α receptor-like 2), CKR-3 has been shown to not only serve as the high affinity receptor for eotaxin, but also for RANTES and MCP-3. CKR-3 is expressed on the cell surface of primary eosinophils and does not bind to other members of the C-C or C-X-C family of chemokines. CKR-3 also serves as a co-receptor for a restricted subset of viruses.

REFERENCES

1. Jose, P.J., et al. 1994. Eotaxin: a potent eosinophil chemoattractant cytokine detected in a guinea pig model of allergic airways inflammation. J. Exp. Med. 179: 881-887.
2. Jose, P.J., et al. 1994. Eotaxin: cloning of an eosinophil chemoattractant cytokine and increased mRNA expression in allergen-challenged guinea-pig lungs. Biochem. Biophys. Res. Commun. 205: 788-794.
3. Ponath, P.D., et al. 1996. Cloning of the human eosinophil chemoattractant, eotaxin. Expression, receptor binding, and functional properties suggest a mechanism for the selective recruitment of eosinophils. J. Clin. Invest. 97: 604-612.
4. Garcia-Zepeda, E.A., et al. 1996. Human eotaxin is a specific chemoattractant for eosinophil cells and provides a new mechanism to explain tissue eosinophilia. Nat. Med. 2: 449-456.
5. Kitaura, M., et al. 1996. Molecular cloning of human eotaxin, an eosinophil-selective C-C chemokine, and identification of a specific eosinophil eotaxin receptor, C-C chemokine receptor 3. J. Biol. Chem. 271: 7725-7730.
6. Choe, H., et al. 1996. The β-chemokine receptors CCR3 and CCR5 facilitate infection by primary HIV-1 isolates. Cell 85: 1135-1148.

CHROMOSOMAL LOCATION

Genetic locus: Ccl11 (mouse) mapping to 11 C.

PRODUCT

eotaxin 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 eotaxin shRNA Plasmid (m): sc-63310-SH and eotaxin shRNA (m) Lentiviral Particles: sc-63310-V as alternate gene silencing products.

For independent verification of eotaxin (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-63310A, sc-63310B and sc-63310C.

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

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

GENE EXPRESSION MONITORING

eotaxin (C-3): sc-373767 is recommended as a control antibody for monitoring of eotaxin 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 eotaxin gene expression knockdown using RT-PCR Primer: eotaxin (m)-PR: sc-63310-PR (20 µl, 529 bp). 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.