

Produktinformation



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SANTA CRUZ BIOTECHNOLOGY, INC.

eotaxin shRNA (h) Lentiviral Particles: sc-43753-V



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-1 α 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 eosinophilselective C-C chemokine, and identification of a specific eosinophil eotaxin receptor, C-C chemokine receptor 3. J. Biol. Chem. 271: 7725-7730.

CHROMOSOMAL LOCATION

Genetic locus: CCL11 (human) mapping to 17q12.

PRODUCT

eotaxin shRNA (h) Lentiviral Particles is a pool of concentrated, transductionready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10⁶ infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see eotaxin siRNA (h): sc-43753 and eotaxin shRNA Plasmid (h): sc-43753-SH as alternate gene silencing products.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

APPLICATIONS

eotaxin shRNA (h) Lentiviral Particles is recommended for the inhibition of eotaxin expression in human cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10⁶ infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

GENE EXPRESSION MONITORING

eotaxin (G-1): sc-374233 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 (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker[™] compatible goat antimouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor eotaxin gene expression knockdown using RT-PCR Primer: eotaxin (h)-PR: sc-43753-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

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