

eotaxin-2 siRNA (h): sc-63311

BACKGROUND

Chemokines have been implicated in the regulation of stem/progenitor cell proliferation and movement. The C-C chemokine eotaxin-2 (also known as MPIF-2, CK β -6 or small inducible cytokine A24), which promotes chemotaxis and Ca^{2+} mobilization in human eosinophils, exerts its activity solely through the CCR3 receptor. In addition, eotaxin-2 lacks suppressive activity against immature subsets of myeloid progenitors, which have been stimulated to proliferate by multiple growth factors. While eotaxin-2 is functionally similar to eotaxin, they share only 39% amino acid homology and differ almost completely in the NH_2 -terminal region.

REFERENCES

1. Patel, V.P., et al. 1997. Molecular and functional characterization of two novel human C-C chemokines as inhibitors of two distinct classes of myeloid progenitors. *J. Exp. Med.* 185: 1163-1172.
2. Forssmann, U., et al. 1997. Eotaxin-2, a novel C-C chemokine that is selective for the chemokine receptor CCR3, and acts like eotaxin on human eosinophil and basophil leukocytes. *J. Exp. Med.* 185: 2171-2176.
3. White, J.R., et al. 1997. Cloning and functional characterization of a novel human C-C chemokine that binds to the CCR3 receptor and activates human eosinophils. *J. Leukoc. Biol.* 62: 667-675.
4. Elsner, J., et al. 1998. Eotaxin-2 activates chemotaxis-related events and release of reactive oxygen species via pertussis toxin-sensitive G proteins in human eosinophils. *Eur. J. Immunol.* 28: 2152-2158.
5. Ying, S., et al. 1999. C-C chemokines in allergen-induced late-phase cutaneous responses in atopic subjects: association of eotaxin with early 6-hour eosinophils, and of eotaxin-2 and monocyte chemoattractant protein-4 with the later 24-hour tissue eosinophilia, and relationship to basophils and other C-C chemokines (monocyte chemoattractant protein-3 and RANTES). *J. Immunol.* 163: 3976-3984.
6. Broxmeyer, H.E., et al. 1999. Effects of C-C, C-X-C, C, and CX3C chemokines on proliferation of myeloid progenitor cells, and insights into SDF-1-induced chemotaxis of progenitors. *Ann. N.Y. Acad. Sci.* 872: 142-162.

CHROMOSOMAL LOCATION

Genetic locus: CCL24 (human) mapping to 7q11.23.

PRODUCT

eotaxin-2 siRNA (h) is a pool of 2 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-2 shRNA Plasmid (h): sc-63311-SH and eotaxin-2 shRNA (h) Lentiviral Particles: sc-63311-V as alternate gene silencing products.

For independent verification of eotaxin-2 (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-63311A and sc-63311B.

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-2 siRNA (h) is recommended for the inhibition of eotaxin-2 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 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-2 (NYRhEOT2): sc-73285 is recommended as a control antibody for monitoring of eotaxin-2 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

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.