

# CXCL16 siRNA (h): sc-105252

## BACKGROUND

CXCL16, also known as SR-PSOX (scavenger receptor for phosphatidylserine and oxidized lipoprotein), binds to CXCR6/Bonzo/STRL33, induces a strong chemotactic response and induces calcium mobilization. CXCL16, an  $\alpha$  (CXC) chemokine, also has characteristics of CC chemokines and a structure similar to fractalkine (neurotactin) in having a transmembrane region and a chemokine domain suspended by a mucin-like stalk. Northern blot analysis of mouse and human tissues detect a 2.2 kb CXCL16 transcript in spleen, lymph nodes, Peyer patches, lung, kidney, small intestine and thymus, with weak expression in heart and liver, and no expression in brain and bone marrow. Flow cytometry and Western blot analysis demonstrate expression of a glycosylated cell-surface protein and a cell supernatant soluble protein.

## REFERENCES

1. Matloubian, M., et al. 2000. A transmembrane CXC chemokine is a ligand for HIV-coreceptor Bonzo. *Nat. Immunol.* 1: 298-304.
2. Wilbanks, A., et al. 2001. Expression cloning of the STRL33/Bonzo/TYMSTR ligand reveals elements of CC, CXC, and CX3C chemokines. *J. Immunol.* 166: 5145-5154.
3. Kume, N. 2002. New oxidized LDL receptors and their functions in atherogenesis. *Nippon Ronen Igakkai Zasshi* 39: 264-267.
4. Nakayama, T., et al. 2003. Cutting edge: profile of chemokine receptor expression on human plasma cells accounts for their efficient recruitment to target tissues. *J. Immunol.* 170: 1136-1140.

## CHROMOSOMAL LOCATION

Genetic locus: CXCL16 (human) mapping to 17p13.2.

## PRODUCT

CXCL16 siRNA (h) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CXCL16 shRNA Plasmid (h): sc-105252-SH and CXCL16 shRNA (h) Lentiviral Particles: sc-105252-V as alternate gene silencing products.

For independent verification of CXCL16 (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-105252A, sc-105252B and sc-105252C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CXCL16 siRNA (h) is recommended for the inhibition of CXCL16 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  $\mu$ M in 66  $\mu$ 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.

## GENE EXPRESSION MONITORING

CXCL16 (C-5): sc-514363 is recommended as a control antibody for monitoring of CXCL16 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 CXCL16 gene expression knockdown using RT-PCR Primer: CXCL16 (h)-PR: sc-105252-PR (20  $\mu$ l, 576 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Santhekadur, P.K., et al. 2012. Multifunction protein staphylococcal nuclease domain containing 1 (SND1) promotes tumor angiogenesis in human hepatocellular carcinoma through novel pathway that involves nuclear factor  $\kappa$ B and miR-221. *J. Biol. Chem.* 287: 13952-13958.
2. Liang, K., et al. 2018. High CXC chemokine ligand 16 (CXCL16) expression promotes proliferation and metastasis of lung cancer via regulating the NF $\kappa$ B pathway. *Med. Sci. Monit.* 24: 405-411.
3. Ma, Z., et al. 2021. Role of CXCL16 in BLM-induced epithelial-mesenchymal transition in human A549 cells. *Respir. Res.* 22: 42.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.