## SANTA CRUZ BIOTECHNOLOGY, INC.

# IL-8 (NYR-HIL8): sc-73321



#### BACKGROUND

Interleukin-8, or IL-8, the prototypic member of the C-X-C, or  $\alpha$ , family of chemokines, is a chemoattractant cytokine involved in the chemotaxis and activation of neutrophils. IL-8 expression has been correlated to a large number of chronic inflammatory diseases, including inflammatory bowel disease (IBD) and atherosclerosis. IL-8 is cleaved from a 99 amino acid precursor to a 72 amino acid, nonglycosylated, biologically active protein. IL-8 monomers and dimers exhibit a dynamic equilibrium both free in solution and in cell surface-bound forms, and thus regulate chemotaxis and receptor signaling. Research has shown that IL-8 dimerization functions as a negative regulator for IL-8 receptor function. Two IL-8 receptors, designated IL-8RA and IL-8RB, have been described and share 77% sequence identity. Both are seven-transmembrane domain proteins (7TMD), similar to the G protein-coupled receptors and, in addition to IL-8, serve as receptors for other members of the  $\alpha$  and  $\beta$  chemokine families.

#### REFERENCES

- Rajarathnam, K., et al. 1994. Neutrophil activation by monomeric interleukin-8. Science 264: 90-92.
- Laterveer, L., et al. 1996. Rapid mobilization of hematopoietic progenitor cells in rhesus monkeys by a single intravenous injection of interleukin-8. Blood 87: 781-788.
- 3. Ahuja, S.K., et al. 1996. C-X-C chemokines bind to unique sets of selectivity determinants that can function independently and are broadly distributed on multiple domains of human interleukin-8 receptor B. Determinants of high affinity binding and receptor activation are distinct. J. Biol. Chem. 271: 225-232.
- 4. Knall, C., et al. 1996. Interleukin-8 regulation of the Ras/Raf/mitogen-activated protein kinase pathway in human neutrophils. J. Biol. Chem. 271: 2832-2838.
- Ray, E., et al. 1996. Dansyl cadaverine regulates ligand induced endocytosis of interleukin-8 receptor in human polymorphonuclear neutrophils. FEBS Lett. 378: 235-239.
- Grimm, M.C., et al. 1996. Interleukin-8: cells of origin in inflammatory bowel disease. Gut 38: 90-98.

#### CHROMOSOMAL LOCATION

Genetic locus: IL8 (human) mapping to 4q13.3.

#### SOURCE

IL-8 (NYR-HIL8) is a mouse monoclonal antibody raised against recombinant IL-8 of human origin.

## PRODUCT

Each vial contains 100  $\mu g~lgG_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## **RESEARCH USE**

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

#### APPLICATIONS

IL-8 (NYR-HIL8) is recommended for detection of IL-8 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IL-8 siRNA (h): sc-39631, IL-8 shRNA Plasmid (h): sc-39631-SH and IL-8 shRNA (h) Lentiviral Particles: sc-39631-V.

Molecular Weight of IL-8: 8 kDa.

## SELECT PRODUCT CITATIONS

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- Hayashi, T., et al. 2010. The infiltration of "primed" neutrophils into multiple organs due to physical abuse to the elderly: an immunohistochemical study. Forensic Sci. Int. 202: 17-25.
- 4. Chen, Y., et al. 2011. ER $\beta$  and PEA3 co-activate IL-8 expression and promote the invasion of breast cancer cells. Cancer Biol. Ther. 11: 497-511.
- Wakabayashi, A., et al. 2013. Targeting interleukin-6 receptor inhibits preterm delivery induced by inflammation. Mol. Hum. Reprod. 19: 718-726.
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- Wang, T., et al. 2015. MicroRNA-106b inhibits osteoclastogenesis and osteolysis by targeting RANKL in giant cell tumor of bone. Oncotarget 6: 18980-18996.
- Li, Z.Y., et al. 2016. TGF-β and NFκB signaling pathway crosstalk potentiates corneal epithelial senescence through an RNA stress response. Aging 8: 2337-2354.
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## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



See **IL-8 (C-11): sc-376750** for IL-8 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.