

## IL-8 (A-6): sc-7302

### 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

1. Rajarathnam, K., et al. 1994. Neutrophil activation by monomeric interleukin-8. *Science* 264: 90-92.
2. 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. 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.
4. Ray, E., et al. 1996. Dansyl cadaverine regulates ligand induced endocytosis of interleukin-8 receptor in human polymorphonuclear neutrophils. *FEBS Lett.* 378: 235-239.
5. Grimm, M.C., et al. 1996. Interleukin 8: cells of origin in inflammatory bowel disease. *Gut* 38: 90-98.
6. Ahuja, S.K., et al. 1996. CXC 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.
7. Wells, T.N., et al. 1996. Selectivity and antagonism of chemokine receptors. *J. Leukoc. Biol.* 59: 53-60.
8. Fernando, H., et al. 2004. Dimer dissociation is essential for interleukin-8 (IL-8) binding to CXCR1 receptor. *J. Biol. Chem.* 279: 36175-36178.

### CHROMOSOMAL LOCATION

Genetic locus: CXCL8 (human) mapping to 4q13.3.

### SOURCE

IL-8 (A-6) is a mouse monoclonal antibody raised against amino acids 1-72 of IL-8 of human origin.

### RESEARCH USE

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

### PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

IL-8 (A-6) 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

1. Recchia, A.G., et al. 2009. A cross-talk between the androgen receptor and the epidermal growth factor receptor leads to p38MAPK-dependent activation of mTOR and cyclinD1 expression in prostate and lung cancer cells. *Int. J. Biochem. Cell Biol.* 41: 603-614.
2. Kim, S.M., et al. 2017. Achaete-scute complex homologue 2 accelerates the development of Sjogren's syndrome-like disease in the NOD/ShiLtJ mouse. *Immunol. Lett.* 190: 26-33.
3. Ke, Y., et al. 2020. Exosomes derived from RPE cells under oxidative stress mediate inflammation and apoptosis of normal RPE cells through Apaf1/caspase-9 axis. *J. Cell. Biochem.* E-published.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

#### CONJUGATES

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