



IL-8 (hBA-77): sc-4601

BACKGROUND

Interleukin-8, or IL-8, the prototypic member of the C-X-C, or α , 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 with a molecular weight of 8 kDa. Whether IL-8 functions *in vivo* as a monomer or a hydrogen-bonded dimer has not yet been resolved. 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 α and β chemokine families.

REFERENCES

1. Rajarathnam, K., Sykes, B.D., Kay, C.M., Dewald, B., et al. 1994. Neutrophil activation by monomeric interleukin-8. *Science* 264: 90-92.
2. Laterveer, L., Lindley, I.J., Heemskerk, D.P., Camps, J.A., 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., Lee, J.C., and Murphy, P.M. 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., Young, S., Nick, J.A., Buhl, A.M., Worthen, G.S., and Johnson, G.L. 1996. Interleukin-8 regulation of the Ras/Raf/mitogen-activated protein kinase pathway in human neutrophils. *J. Biol. Chem.* 271: 2832-2838.
5. Ray, E. and Samanta, A.K. 1996. Dansyl cadaverine regulates ligand induced endocytosis of interleukin-8 receptor in human polymorphonuclear neutrophils. *FEBS Lett.* 378: 235-239.
6. Grimm, M.C., Elsbury, S.K., Pavli, P., and Doe, W.F. 1996. Interleukin 8: cells of origin in inflammatory bowel disease. *Gut* 38: 90-98.
7. Wells, T.N., Power, C.A., Lusti-Narasimhan, M., et al. 1996. Selectivity and antagonism of chemokine receptors. *J. Leukocyte Biol.* 59: 53-60.

SOURCE

IL-8 (hBA-77) is produced in *E. coli* as 35 kDa biologically active protein corresponding to 77 amino acids of IL-8 of human origin.

PRODUCT

IL-8 (hBA-77) is purified from bacterial lysates (>98%); supplied as 50 μ g purified protein.

BIOLOGICAL ACTIVITY

IL-8 (hBA-77) is biologically active as determined by chemotaxis over a wide concentration range in an assay using human peripheral blood neutrophils. Significant chemotaxis was achieved using a concentration range between 25 to 150 ng/ml.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.