SANTA CRUZ BIOTECHNOLOGY, INC.

vCCI (13J-1): sc-80432



BACKGROUND

C-C chemokines are chemoattractants and activators for monocytes and T cells. They play important roles in the immune system regulating the chemotaxis of a variety of cells to the sites of infection and inflammation. C-C chemokines function by binding to GAGs (glycosaminoglycans) and G proteincoupled chemokine receptors on the surface of immune cells. vCCl (viral C-C chemokine inhibitor) is a secreted, poxvirus-encoded C-C chemokine inhibitor. It binds with high affinity to many C-C chemokine, blocking their receptor and GAG-binding site, thereby potently inhibiting chemokine action, interfering with the host immune response and reducing inflammation. vCCl shares no amino acid sequence homology with any known cellular protein. In addition, it has relatively low or no affinity for chemokines of other subfamilies.

REFERENCES

- Smith, C.A., et al. 1997. Poxvirus genomes encode a secreted, soluble protein that preferentially inhibits β chemokine activity yet lacks sequence homology to known chemokine receptors. Virology 236: 316-327.
- Carfí, A., et al. 1999. Structure of a soluble secreted chemokine inhibitor vCCI (p35) from cowpox virus. Proc. Natl. Acad. Sci. USA 96: 12379-12383.
- Beck, C.G., et al. 2001. The viral C-C chemokine-binding protein vCCl inhibits monocyte chemoattractant protein-1 activity by masking its CCR2B-binding site. J. Biol. Chem. 276: 43270-43276.
- Burns, J.M., et al. 2002. Comprehensive mapping of poxvirus vCCl chemokine-binding protein. Expanded range of ligand interactions and unusual dissociation kinetics. J. Biol. Chem. 277: 2785-2789.
- Reading, P.C., et al. 2003. A soluble chemokine-binding protein from vaccinia virus reduces virus virulence and the inflammatory response to infection. J. Immunol. 170: 1435-1442.
- Spinetti, G., et al. 2004. Rat aortic MCP-1 and its receptor CCR2 increase with age and alter vascular smooth muscle cell function. Arterioscler. Thromb. Vasc. Biol. 24: 1397-1402.
- Mikheev, M.V., et al. 2004. Phylogenetic analysis of chemokine-binding protein gene from orthopoxviruses. Mol. Gen. Mikrobiol. Virusol. 1: 29-36.
- Zhang, L., et al. 2006. Solution structure of the complex between poxvirusencoded C-C chemokine inhibitor vCCl and human MIP-1β. Proc. Natl. Acad. Sci. USA 103: 13985-13990.
- Derider, M.L., et al. 2006. Resonance assignments and secondary structure of vCCI, a 26 kDa C-C chemokine inhibitor from rabbitpox virus. J. Biomol. NMR 1: 22.

SOURCE

vCCI (13J-1) is a mouse monoclonal antibody raised against full length recombinant CCI of viral origin.

PRODUCT

Each vial contains 100 $\mu g~lg G_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

vCCl (13J-1) is recommended for detection of CCl of viral origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of vCCI: 35 kDa.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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.