Recombinant Viral MIP-I

Catalog Number: 600-VA

DESCRIPTION

Source	*E. coli*-derived Ala25-Ala95 Accession # YP_001129366
N-terminal Sequence Analysis	Ala25
Predicted Molecular Mass	7.9 kDa

SPECIFICATIONS

Activity	Measured by its ability to chemoattract BW5147 mouse T lymphoma cells. The ED_{50} for this effect is 2-6 ng/mL. Measured by its ability to chemoattract BaF3 mouse pro-B cells transfected with human CCR8. The ED_{50} for this effect is 4-16 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>97%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in Acetonitrile and TFA with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 50 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human herpesvirus-8 (HHV-8)/Kaposi's sarcoma-associated herpesvirus (KSHV) is a γ herpesvirus with homology to herpesvirus Saimiri and Epstein-Barr virus. HHV-8 is etiologically linked to Kaposi's sarcoma and a B-cell lymphoma known as primary effusion lymphoma. HHV-8 has been shown to encode a variety of immunomodulatory proteins which were apparently pirated from cellular genes by the virus. Three chemokine-like proteins, vMIP-I, vMIP-II and vMIP-III have been found to be encoded within the HHV-8 genome.

Viral MIP-I (also termed vMIP-1α) cDNA encodes a 95 amino acid (aa) residue precursor protein with a 24 aa residue signal peptide that is cleaved to yield a 71 aa residue mature protein. Among human chemokines, vMIP-I is most closely related to MIP-1α, sharing approximately 38% amino acid sequence identity. At the amino acid sequence level, vMIP-I and vMIP-II also share 48% identity. vMIP-I and vMIP-II are more closely related to one another phylogenetically than to other human chemokines, suggesting that they may have arisen by gene duplication within the virus rather than by two independent gene aquisitions. Both vMIP-I and vMIP-II have been shown to partially block HIV infection of peripheral blood mononuclear cells. vMIP-I and vMIP-II have also been found to be highly angiogenic in the chorioallantoic assay, suggesting that they may be partially responsible for the marked vascularity seen in KSHV-associated tumors.

References:

1. Moore, P.S. *et al.* (1996) Science **274**:5293.
2. Boshoff, C. *et al.* (1997) Science **278**:290.

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