Overview

Synonyms	Macrophage Inflammatory Protein-1±, CCL3, LD78±
Description	**MIP-1 alpha/CCL3,** also known as LD78 alpha, is an inflammatory chemokine. MIP-1± belongs to the CCL chemokine family, and shares 68% homology with MIP-1² . The mature form of MIP-1± contains 69 amino acids, exists as dimers in solution, and tends to undergo reversible aggregation. The receptors of MIP-1±*in vivo are mainly the G-protein coupled receptors CCR1 and CCR5. Upon stimulation by endogenous and exogenous agents such as Interleukin-1² , Interferon-³ , and lipoteichoic acid from Gram-positive bacteria, monocytes are able to secrete significant amounts of MIP-1±. MIP-1± augments the adhesions of T lymphocytes, monocytes, and neutrophils to vascular cell adhesion molecule 1. In addition, in wounds, MIP-1± chemo-attracts macrophages in order to accelerate the tissue repair process.* *Recombinant **human MIP-1 alpha/CCL3 (rhMIP-1 alpha)** produced in E. coli is a single non-glycosylated polypeptide chain containing 70 amino acids. A fully biologically active molecule, rhMIP-1 alpha has a molecular mass of 7.8 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.*
Accession No	P10147
Species	Human
Source	*E. coli*
Biological Activity	ED_{50} < 80 ng/mL, measured by the FLIPR assay using CHO cells transfected with human CCR5, the receptor of human CCL3, corresponding to a specific activity of > 1.25×10^{4} units/mg.
Sequence	ASLAADTPTA CCFSYTSRQI PQNFIADYFE TSSQCSKPGV IFLTKRSRQV CADPSEEWVQ KYVSDLELSA

Properties

Measured Molecular Weight	7.8 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH_2O or PBS at 100 µg/ml.
Endotoxin Level	< 0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant **human MIP-1 alpha/CCL3 (rhMIP-1 alpha)** remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhMIP-1 alpha remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.
Note	For research use only

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