

MIP-2/CXCL2 Protein, Mouse

Cat. No.:	HY-P7258
Synonyms:	rMuMIP-2/CXCL2; C-X-C motif chemokine 2; SCYB2
Species:	Mouse
Source:	E. coli
Accession:	P10889 (G27-N100)
Gene ID:	20310
Molecular Weight:	Approximately 10 kDa

PROPERTIES

AA Sequence	G A V V A S E L R C Q C L K T L P R V D F K N I Q S L S V T P P G P H C A Q T E V I A T L K G G Q K V C L D P E A P L V Q K I I Q K I L N K G K A N
Biological Activity	<ol style="list-style-type: none"> The ED₅₀ is <1 ng/mL as measured by CHO-K1/Gα15/mCXCR2 cells (human Gα15 and mouse CXCR2 stably expressed in CHO-K1 cells). Measured in a cell proliferation assay using HUVEC human umbilical vein endothelial cells. The ED₅₀ this effect is 24.09 ng/ml, corresponding to a specific activity is 41511 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>CXCL2 is a chemokine induced by endotoxin and serves as an extremely potent chemo-attractant for neutrophils, acting as a crucial inflammatory mediator. CXCL2 could be produced by multiple, different cell types, including macrophages and cancer cells. CXCL2 is involved in cancer metastasis, angiogenesis, and wound healing^{[1][4][5]}.</p> <p>The amino acid sequence of human CXCL2 protein has low homology between mouse and rat CXCL2 protein. CXCL2 is 90% identical in amino acid sequence as a related chemokine, CXCL1. The gene for CXCL2 is located on human</p>
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chromosome 4 in a cluster of other CXC chemokines. CXCL2 binds to the G-protein coupled receptor CXCR2 (IL-8RB) expressed on macrophages, neutrophils, and epithelial cells and its classical function is to act as chemotactic factors attracting neutrophils to sites of injury^{[2][3]}.

In enterocytes, LPS induces CXCL2 expression and promotes migration of neutrophils in a model of platelet-activating factor induced shock and bowel injury. In acute lung injury, CXCR2 ligands, including CXCL1/2/3, have chemotactic effects for polymorphonuclear leukocytes^[4]. CXCL2 could provoke a dose-dependent increase of colorectal tumor cell migration in vitro. Further, according to Bachmeier et al., CXCL-1 and -2 silencing could down-regulate several metastasis-promoting genes and inhibit the metastatic potential of breast cancer cells^[5].

REFERENCES

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