MIP-2/CXCL2 Protein, Mouse (His-SUMO)

Cat. No.:	HY-P75154
Synonyms:	C-X-C motif chemokine 2; MIP2; Cxcl2; Scyb2
Species:	Mouse
Source:	E. coli
Accession:	P10889 (A28-N100)
Gene ID:	20310
Molecular Weight:	Approximately 30 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 0.1% TFA, pH 2.9. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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

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].

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 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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[6]. Sagar Paudel, et al. CXCL1 regulates neutrophil homeostasis in pneumonia-derived sepsis caused by Streptococcus pneumoniae serotype 3. Blood. 2019 Mar 21;133(12):1335-1345.

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