

## Lipocalin-2/NGAL Protein, Mouse (HEK293, Fc)

Cat. No.:	HY-P78329
Synonyms:	NGAL; Lipocalin-2; Oncogene 24p3; p25; Siderocalin LCN2; MSFI
Species:	Mouse
Source:	HEK293
Accession:	P11672 (Q21-N200)
Gene ID:	16819
Molecular Weight:	50-60 kDa

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 $\mu$ m filtered solution of 50 mM MES, 150 mM NaCl, pH 6.5 or 20mM MES, 150mM NaCl, 10% Glycerol, pH 5.5.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

#### Background

Lipocalin-2/NGAL, an iron-trafficking protein, participates in various biological processes, including apoptosis, innate immunity, and renal development. Through its interaction with the siderophore 2,3-dihydroxybenzoic acid (2,3-DHBA), reminiscent of bacterial enterobactin, Lipocalin-2/NGAL modulates cellular iron levels, acting as a conveyor or extractor of iron depending on the cellular context. The iron-bound form (holo-24p3) is internalized upon binding to the SLC22A17 (24p3R) receptor, releasing iron and elevating intracellular iron concentration. Conversely, the iron-free form (apo-24p3), upon binding to SLC22A17 (24p3R), associates with an intracellular siderophore, leading to iron chelation and subsequent extracellular iron transfer, thereby diminishing intracellular iron levels. In the realm of apoptosis induced by interleukin-3 (IL3) deprivation, the iron-loaded form averts apoptosis by increasing intracellular iron concentration, while the iron-free form fosters apoptosis by reducing intracellular iron levels, inducing the expression of the proapoptotic protein BCL2L11/BIM. Lipocalin-2/NGAL also plays a crucial role in innate immunity by restraining bacterial proliferation through the sequestration of iron bound to microbial siderophores like enterobactin. Moreover, it exhibits the ability to bind siderophores from *M.tuberculosis*. Lipocalin-2/NGAL can exist as a monomer, a homodimer linked by disulfide bonds, or a heterodimer with MMP9, further expanding its functional versatility.

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA