

# Cytokines

## Human Recombinant Lipocalin-2

Lipocalin-2, His tag

Catalog #100-1295

100 µg



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## Product Description

Lipocalin-2 (LCN2), also known as neutrophil gelatinase-associated lipocalin (NGAL), is a member of the lipocalin superfamily. Members of this family transport small hydrophobic molecules and share a highly conserved fold with an eight-stranded antiparallel beta barrel (Flower). Lipocalin-2 contains a His-residue tag at the carboxyl end of the polypeptide chain. It is expressed mainly in activated neutrophils but is also secreted by other immune cells as a response to infection. Lipocalin-2 plays a role in innate immunity, acting as a potent bacteriostatic reagent by sequestering iron-containing siderophores (Flo et al.). It has also been implicated in multiple cellular processes, such as differentiation (Yang et al.), migration (Du et al.), and apoptosis (Devireddy et al.). In vitro studies suggest that lipocalin-2 is a potential therapeutic target for various cancers, such as colorectal cancer (Zhang et al.) and chronic lymphocytic leukemia (Bauvois et al.).

## Product Information

**Alternative Names:** 24p3, MSFI, NGAL, p25

**Accession Number:** NP\_005555.2 (Gln21-Gly198) was expressed with a spacer sequence (ADDDDKA) and polyhistidine tag at the C-terminus.

**Amino Acid Sequence:** QDSTSDLIPA PPLSKVPLQQ NFQDNQFQ GK WYVVGLAGNA ILREDKDPQK MYATIELKE DKSYNVTSVL FRKKKCDYWI RTFVPGCQPG EFTLGNIKS Y PGLTSYLVRV VSTNYNQHAM VFFKKVSQNR EYFKITLYGR TKELTSELKE NFIRFSKSLG LPENHIVFPV PIDQCIDGAD DDDKAHHHHH HHHHH

**Predicted Molecular Mass:** 22.7 kDa

**Species:** Human

**Formulation:** Lyophilized from sterile PBS, pH 7.4. Trehalose (5 - 8%), mannitol, and 0.01% TWEEN® 80 are normally added as protectants before lyophilization.

**Source:** HEK293 cells

## Specifications

**Activity:** Not available

**Purity:** ≥ 94%

**Endotoxin Level:** Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

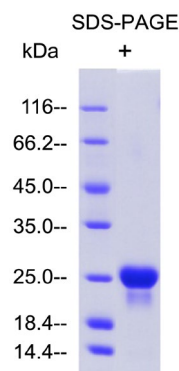
## Preparation and Storage

**Storage:** Store at -20 to -80°C.

**Stability:** Stable as supplied for 12 months from date of receipt.

**Preparation:** Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.25 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

## Data



Human Recombinant Lipocalin-2 was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant Lipocalin-2 has a predicted molecular mass of 22.7 kDa but an apparent molecular mass of 25.7 kDa due to glycosylation.

## Related Products

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## References

- Bauvois B et al. (2020) Relation of neutrophil gelatinase-associated lipocalin overexpression to the resistance to apoptosis of tumor B cells in chronic lymphocytic leukemia. *Cancers (Basel)* 12(8): 2124.
- Devireddy LR et al. (2001) Induction of apoptosis by a secreted lipocalin that is transcriptionally regulated by IL-3 deprivation. *Science* 293(5531): 829–34.
- Du Z-P et al. (2015) Lipocalin 2 promotes the migration and invasion of esophageal squamous cell carcinoma cells through a novel positive feedback loop. *Biochim Biophys Acta - Mol Cell Res* 1853(10): 2240–50.
- Flo TH et al. (2004) Lipocalin 2 mediates an innate immune response to bacterial infection by sequestering iron. *Nature* 432(7019): 917–21.
- Flower D R. (1994) The lipocalin protein family: A role in cell regulation. *FEBS Lett* 354(1): 7–11.
- Yang J et al. (2002) An iron delivery pathway mediated by a lipocalin. *Mol Cell* 10(5): 1045–56.
- Zhang W et al. (2021) Epigenetic induction of lipocalin 2 expression drives acquired resistance to 5-fluorouracil in colorectal cancer through integrin  $\beta$ 3/SRC pathway. *Oncogene* 40(45): 6369–80.

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