

Recombinant Human Lipocalin-2

Information

Gene ID	3934
Accession #	P80188
Alternate Names	NGAL
Source	HEK293
M.Wt	Approximately 41.0 kDa, a homodimeric protein consisting of two 178 amino acid non-glycosylated polypeptide chains.
Appearance	Solution protein
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. -12 months from date of receipt, -20 to -70°C as supplied.
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Testing in progress.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

			B uninoun	
Componente	10 µg	100 µg	1 mg	
Components		Partectio.		
Recombinant Human Ciliary Neurotrophic	10 ua	100 µg	1 ma	
Factor				
Use a manual defrost freezer and avoid repeated fre	eze-thaw cycles			
-12 months from date of receipt.				
20 to 70° C as supplied				

Quality Control	
Purity	\geqslant 95% by SDS-PAGE and HPLC analyses.

Endotoxin

<1.0 EU per 1 ug of the protein by the LAL method.

Description

Lipocalin-2, also known as Neutrophil Gelatinase-Associated Lipocalin (NGAL), is a 25 kDa protein existing in monomeric and homo- and heterodimeric (a dimer MMP-9) forms. Its expression has been observed in most tissues normally exposed to microorganism and epithelial cells during inflammation. Lipocalin-2 has been implicated in a variety of processes including cell differentiation, tumorigenesis, and apoptosis. It acts as a potent bacteriostatic reagent by sequestering iron. Studies indicate that Lipocalin-2 forms complex with a bacterial catecholate sidropore bound to ferric ion such as enterobactin. The bound ferric enterobactin complex breaks down slowly in a month into dihydroxybenzoyl serine and dihydroxybenzoic acid (DHBA). It also binds to a ferric DHBA complex. Secretion of Lipocalin-2 in immune cells increases by stimulation of Toll-like receptor as an acute phase response to infection. Moreover, Lipocalin-2 can alter the invasive and metastatic behavior of Rastransformed breast cancer cells in vitro and in vivo by reversing epithelial to mesenchymal transition inducing activity of Ras, through restoration of E-cadherin expression, via effects on the Ras-MAPK signaling pathway.

Reference

