Recombinant Human Lipocalin-2/NGAL/LCN2 Protein

RPCB0006

Protein Information

Size:	10 µg , 20 µg , 50 µg , 100 µg	**Tag:**	C-His
Reactivity:	Human	**Expressed Host:**	-
Calculated MW:	21.39 kDa	**Observerd MW:**	20-25 kDa

Background

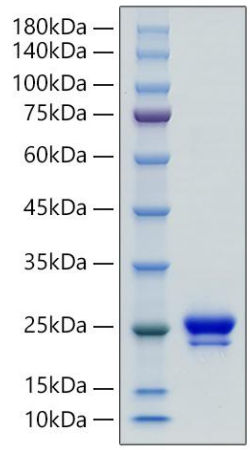
Lipocalin-2, also known as Neutrophil Gelatinase-Associated Lipocalin (NGAL), was originally identified as a component of neutrophil granules. It is a 25 kDa protein existing in monomeric and homo- and heterodimeric forms, the latter as a dimer with human neutrophil gelatinases (MMP-9). Its expression has been observed in most tissues normally exposed to microorganism, and its synthesis is induced in epithelial cells during inflammation. Lipocalin-2 has been implicated in a variety of processes including cell differentiation, tumorigenesis, and apoptosis. Studies indicate that Lipocalin-2 binds a bacterial catecholate sidropore bound to ferric ion such as enterobactin with a subnanomolar dissociation constant. 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 with much less Kd values (7.9 nM). Secretion of Lipocalin-2 in immune cells increases by stimulation of Toll-like receptor as an acute phase response to infection. As a result, it acts as a potent bacteriostatic reagent by sequestering iron. Moreover, Lipocalin-2 can alter the invasive and metastatic behavior of Ras-transformed 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.

Properties

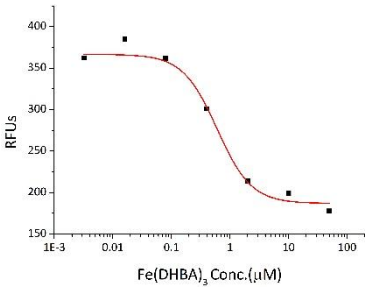
Synonyms:	LCN2, HNL, NGAL, Neutrophil gelatinase-associated lipocalin, NGAL, 25 kDa alpha-2-microglobulin-related subunit of MMP-9, Lipocalin-2, Oncogene 24p3, Siderocalin, p25
Gene ID:	3934
Endotoxin:	< 0.01 EU/µg of the protein by LAL method
Description:	High quality, high purity and low endotoxin recombinant Recombinant Human Lipocalin-2/NGAL/LCN2 Protein (RPCB0006), tested reactivity in HEK293 cells and has been validated in SDS-PAGE.100% guaranteed.
Purity:	≥ 95 % as determined by SDS-PAGE.

Storage: Store at -20°C. Store the lyophilized protein at -20°C to -80°C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Validation Data



Recombinant Human Lipocalin-2/NGAL/LCN2 Protein was determined by SDS-PAGE under reducing.



Measured by its ability to bind Iron(III) dihydroxybenzoic acid [Fe(DHBA)3]. The binding of Fe(DHBA)3 results in the quenching of Trp fluorescence in recombinant mouse Lipocalin-2. Recombinant human Lipocalin-2 can bind >0.60 µM of Fe(DHBA)3.