Data Sheet (Cat.No.TMPK-00085)

TargetMol

NGAL/Lipocalin-2 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	NGAL;Lipocalin-2;Oncogene 24p3;MSFI;Siderocalin LCN2;p25
Protein Construction:	Gln21-Gly198
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P80188-1
Molecular Weight:	47.2 kDa (predicted). Due to glycosylation, the protein migrates to 48-52 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Human NGAL, hFc Tag at 0.5μg/ml (100μl/Well) on the plate. Dose response curve for Biotinylated Anti-NGAL Antibody, hFc Tag with the EC50 19.7ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM MES, 150 mM NaCl (pH 6.5). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in 50mM MES,150mM NaCl (pH 6.5). The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Acute kidney injury (AKI) is one of the most common complications of various serious conditions, and early diagnosis is therefore critical for the treatment of AKI. Recent evidence demonstrates that neutrophil gelatinase-associated lipocalin (NGAL) is closely associated with AKI. Several experimental and clinical studies have shown

that the expression of urine and serum NGAL increases significantly in AKI. NGAL shows potential to be a new effective early biochemical marker of AKI. Further studies are needed to confirm the significant advantages of NGAL in the diagnosis of early AKI and its value in clinical applications.

Reference

Shang W, Wang Z. The Update of NGAL in Acute Kidney Injury. Curr Protein Pept Sci. 2017;18(12):1211-1217. doi: 10.2174/1389203717666160909125004. PMID: 27634444.