Data Sheet (Cat.No.TMPY-01771)

TargetMol

Latexin Protein, Mouse, Recombinant (His)

General Information

Synonyms: latexin

Protein Construction: A DNA sequence encoding the mouse LXN (NP_058033.2) (Glu 2-Glu 222) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met

Species: Mouse

Expression Host: E. coli

Accession: P70202

Molecular Weight: 26.3 kDa (predicted); 32 kDa (reducing conditions)

QC Testing

Biological Activity: Measured by its ability to inhibit carboxypeptidase-A1 cleavage of the colorimetric peptide substrate Ac-Phe-Thiaphe-OH in the presence of 5,5'Dithiobis(2-nitrobenzoic acid) (DTNB) (Edwards, K.M. et al, 1999, J. Biol. Chem. 274:30468). The IC50 value is <2.0 nM .

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: Please contact us for more information.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 8.0, 10% glycerol. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

Latexin, also known as endogenous carboxypeptidase inhibitor, tissue carboxypeptidase inhibitor, TCI, ECI, and LXN, is a cytoplasm protein that belongs to the protease inhibitor I47 (latexin) family. It is highly expressed in the heart, prostate, ovary, kidney, pancreas, and colon. Latexin / LXN is the only known endogenous specific inhibitor of zinc-dependent metallocarboxypeptidases (MCPs) present in mammalians so far. Latexin is originally identified

as a molecular marker for the regional specification of the neocortex in development in rats. The 222 amino acid latexin in the human shows different expression distribution with high levels in heart, prostate, ovary, kidney, pancreas, and colon, but only moderate or low levels in other tissues including the brain. Latexin is also expressed at high levels and is inducible in macrophages in concert with other protease inhibitors and potential protease targets, and thus is suggested to play a role in inflammation and innate immunity pathways. Despite the non-detectable sequence similarity with plant and parasite inhibitors, Latexin is related to a human putative tumor suppressor protein, TIG1. Also, Latexin is implicated in Alzheimer's disease.

Reference

Liu Q.,et al.,(2000), Cloning, tissue expression pattern and genomic organization of latexin, a human homologue of rat carboxypeptidase A inhibitor. Mol. Biol. Rep. 27:241-246.

Gauci S.,et al., (2009), Lys-N and trypsin cover complementary parts of the phosphoproteome in a refined SCX-based approach.nal. Chem. 81:4493-4501.

Muzny D.M.,et al.,(2006), The DNA sequence, annotation and analysis of human chromosome 3.Nature 440:1194-1198.