



LD Biopharma, Inc.
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human LXN Protein
Catalog Number: hRP-0886
Manufacturer: LD Biopharma, Inc.

Introduction

Human Latexin (LXN) was originally identified as a marker of neurons in the lateral neocortex of developing rat brain. Functionally, latexin is a potent inhibitor of carboxypeptidase A (CPA), and shares structural similarity with a cysteine protease inhibitor cystatin C. LXN is expressed at high levels in murine macrophages, and is further up-regulated in response to inflammatory stimuli in concert with other protease inhibitors and potential protease targets. It has been reported that LXN is also induced during BMP2 mediated differentiation of osteoblasts and chondrocytes. These findings suggest that LXN is involved in inflammation and bone formation, probably through the regulation of tissue-specific protein degradation and turnover. Recent data also indicated that in human tissue, LXN specifically expressed in hematopoietic stem/progenitor cells in the bone marrow, and plays an important role in regulating human hematopoietic stem cell (HSC) differentiation.

Full-length mature human LXN (222aa) gene was constructed with 15 aa N-terminal T7 tag. This protein is expressed in E.coli as inclusion bodies. The final product was refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

Gene Symbol: LXN (ECI, TCI)
Accession Number: NP_064554.3
Species: Human
Size: 50 µg / Vial
Composition: 0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.



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Key References

Mitsunaga, K., et al., *Latexin regulates the abundance of multiple cellular proteins in hematopoietic stem cells*. J. Cell. Physiol. 227 (3), 1138-1147 (2012)

Pallares, I., et al., *Structure of human carboxypeptidase A4 with its endogenous protein inhibitor, latexin*. Proc. Natl. Acad. Sci. U.S.A. 102 (11), 3978-3983 (2005)

Applications

1. May be used for in vitro human mediated human HSC differentiation regulation study with “ProFectin” based intracellular delivery of this protein.
2. As soluble /native protein, may be used as enzymatic substrate protein for kinase or ubiquitin assay development.
3. May be used for mapping LXN protein-protein interaction.
4. Potential diagnostic biomarker protein for leukemia/lymphoma.
5. As antigen for specific antibody production

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGEFMEIPPTNYPASRAALVAQNYINYQQGTPHRVFEVQKVKQASMEDI PGRG
HKYHLKFAVEEIIQKQVKNCTAEVLYPSTGQETAPEVNFTFEGETGKNPDEEDNTFYQRLKSM
KEPLEAQNI PDNFGNVSPEMTLVLHLAWVACGYIIWQNSTEDTWYKMKVIQTVKVQRNDDFIE
LDYTILLHNIASQEIIIPWQMQVLWHPQYGTKVKHNSRLPKEVQLE