



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human ITIH2-H2 Chain Protein
Catalog Number: hRP-2007
Manufacturer: LD Biopharma, Inc.

Introduction

The inter-alpha-trypsin inhibitors (ITI) are a family of structurally related plasma serine protease inhibitors involved in extracellular matrix stabilization and in prevention of tumor metastasis. Inter-alpha-inhibitor (IaI) complex has been associated to inflammation processes, hepatitis, cancer and even kidney diseases. The ITI family contains multiple proteins made up of a light chain and a variable number of heavy chains. Human inter-alpha-trypsin inhibitor heavy chain H2 (ITIH2) may act as a carrier of hyaluronan in serum or as a binding protein between hyaluronan and other matrix protein, including those on cell surfaces in tissues to regulate the localization, synthesis and degradation of hyaluronan, which are essential to cells undergoing biological processes.

Full-length mature form of human IITIH2 cDNA (55 - 702aa) was constructed with codon optimization gene synthesis and expressed with N-terminal-T7-His-TEV cleavage site Tag (29aa) fusion 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: ITIH2 (H2P; SHAP)
Accession Number: NP_002207.2
Species: Human
Size: 25 µg / Vial
Composition: 0.25 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References



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Scavenius C, et al., *The Compact and Biologically Relevant Structure of Inter-alpha-inhibitor Is Maintained by the Chondroitin Sulfate Chain and Divalent Cations*. J. Biol. Chem. 291 (9), 4658-4670 (2016)

Scavenius C, et al., *Human inter-alpha-inhibitor is a substrate for factor XIIIa and tissue transglutaminase*. Biochim. Biophys. Acta 1814 (12), 1624-1630 (2011)

Buschow SI, et al., *MHC class II-associated proteins in B-cell exosomes and potential functional implications for exosome biogenesis* Immunol. Cell Biol. 88 (8), 851-856 (2010)

Applications

1. May be used for in vitro ITIH2 mediated hyaluronan and patrix protein intercation pathway regulation study in various cells with this chain protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction assay.
3. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGFSLPGESEEMMEEVDQVTLYSYKVQSTITSRMATTM
IQSKVVNNSPQPQNVVFDVQIPKGAFISNFSMTVDGKTFRSSIKEKTVGRALYAQARAKGKTAG
LVRSSALDMENFRTEVNVLPGAKVQFELHYQEVKWRKLGSYEHRIYLPQGRLLAKHLEVDVWVIE
PQGLRFLHVPDTFEGHFDGVPVVISKGQQKAHV SFKPTVAQQRICPNCRETAVDGELVVLYDVKR
EEKAGELEVFNGYFVHFFAPDNLDPKPKNILFVIDVSGSMWGVKMKQTVEAMKTI LDDLRAEDH
FSVIDFNQNI RTWRNDLISATKTQVADAKRYIEKI QPSGGTNINEALLRAIFILNEANNLGLLD
PNSVSLIILVSDGDPTV GELKLSKI QKNVKENIQDNISLFSLGMGFDVDYDFLKRLSNENHGIA
QRIYGNQDTSSQLKKFY NQVSTPLLRNVQFNYPHTSVTDVTQNNFHNYFGGSEIVVAGKFDPAK
LDQIESVITATSANTQLVLET LAQMDDLQDFLSKDKHADPDFTRKLWAYLTINQLLAERSLAPT
AAAKRRITRSILQMSLDHHIVTPLTSLVIENEAGDERMLADAPPQDPSCCSGALYYGSKVVPDS
TPSWANPSPTPVISMLAQGSQVLESTPPPHVMRVEND