



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human MNAT1 Protein
Catalog Number: hTF-1534
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human CDK-activating kinase assembly factor MAT1 (MNAT1) gene, along with cyclin H and CDK7, forms the CDK-activating kinase (CAK) enzymatic complex. This complex activates several cyclin-associated kinases and can also associate with TFIIF to activate transcription by RNA polymerase II by serine phosphorylation of the repetitive C-terminal domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts. Two transcript variants encoding different isoforms have been found for this gene.

Full-length human MNAT1 cDNA (308aa) was constructed with codon optimization technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. It was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: MNAT1 (CAP35; MAT1; RNF66; TFB3)
Accession Number: NP_002422.1
Species: Human
Size: 50 µg / Vial
Composition: 0.50 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 7 days.

Key References

Lou S, et al., *The lost intrinsic fragmentation of MAT1 protein during*



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

granulopoiesis promotes the growth and metastasis of leukemic myeloblasts. Stem Cells 31 (9), 1942-1953 (2013)

Aprelikova O, et al., *Both p16 and p21 families of cyclin-dependent kinase (CDK) inhibitors block the phosphorylation of cyclin-dependent kinases by the CDK-activating kinase. J. Biol. Chem. 270 (31), 18195-18197 (1995)*

Applications

1. May be used for in vitro GATA1 mediated gene transcription regulation for *various human cell's differentiation* study with "ProFectin" reagent based intracellular delivery of this protein.
2. May be used as specific protein substrate for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
3. May be used for MNAT1 protein-protein interaction mapping.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGDDQGCPRCKTTKYRNPSLKL MNVNCGHTLCESCVDLLF
VRGAGNCPECGTPLRKS NFRVQLFEDPTVDKEVEIRKKVLKIYNKREEDFPSLREYNDFFLEEVE
EIVFNLTNNVDLDNTKKKMEIYQKENKDVIQKNKLLTREQEELEEALEVERQENEQRRLF IQK
EEQLQQIILKRKNKQAFLELESDDL PVALLLA QHKDRSTQLEMQLEKPKPKVPVTFSTGIKMGQ
HISLAPIHKLEEALY EYQPLQIETYGPHVPELEMLGRLGYLNHVRAASPQDLAGGYTSSLACHR
ALQDAFSGLFWQPS