# Recombinant human UDP-glucose dehydrogenase/UGDH protein

Catalog Number: ATGP0611

## PRODUCT INFORMATION

**Expression system**
E.coli

**Domain**
1-494aa

**UniProt No.**
O60701

**NCBI Accession No.**
NP_003350.1

**Alternative Names**
UDP-glucose 6-dehydrogenase, UDP-Glc dehydrogenase, UDP-GlcDH, UDPGDH

## PRODUCT SPECIFICATION

**Molecular Weight**
59.5 kDa (533aa) confirmed by MALDI-TOF

**Concentration**
0.5mg/ml (determined by Bradford assay)

**Formulation**
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 20% glycerol, 1mM DTT, 0.1M NaCl, and 1mM EDTA

**Purity**
> 95% by SDS-PAGE

**Biological Activity**
Specific activity is > 2500pmol/min/ug, and is defined as the amount of enzyme that convert 1.0pmole of UDP-glucose to UDP-glucuronate per minute at pH 8.7 at 37C.

**Tag**
His-Tag

**Application**
SDS-PAGE, Enzyme Activity

**Storage Condition**
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

**Description**
uGDH is a member of the uDP-glucose/GDP-mannose dehydrogenase family and is a ubiquitously expressed protein most abundant in the liver. This protein converts uDP-glucose to uDP-glucuronate and thereby participates in the biosynthesis of glycosaminoglycans such as hyaluronan, chondroitin sulfate, and heparan

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sulfate. These glycosylated compounds are common components of the extracellular matrix and likely play roles in signal transduction, cell migration, and cancer growth and metastasis. Recombinant human uGDH protein, fused to his-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques

### Amino acid Sequence

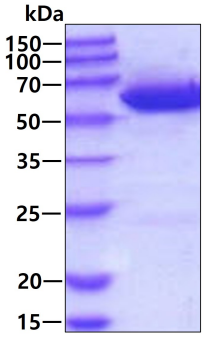
<MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSELE>M FEIKKICCIG AGYVGGPTCS VIAHMCPEIR VTVVDVNESR INAWNSPTLP IYEPGLKEVV ESCRGKNLFF STNIDDAIKE ADLVFISVNT PTKTYGMGKG RAADLKYIEA CARRIVQNSN GYKIVTEKST VPVRAAESIR RIFDANTKPN LNLQVLSNPE FLAEGTAIKD LKNPDRVLIG GDETPEGQRA VQALCAVYEH WVPREKILTT NTWSSELSKL AANAFLAQRI SSINSISALC EATGADVEEV ATAIGMDQRI GNKFLKASVG FGGSCFQKDV LNLVYLCEAL NLPEVARYWQ QVIDMNDYQR RRFASRIIDS LFNTVTDKKI AILGFAFKKD TGDTRESSSI YISKYLMDEG AHLHIYDPKV PREQIVVDLS HPGVSEDDQV SRLVTISKDP YEACDGAHAV VICTEWDMFK ELDYERIHKK MLKPAFIFDG RRVLDGLHNE LQTIGFQIET IGKKVSSKRI PYAPSGEIPK FSLQDPPNKK PKV

### General References

Bontemps Y., et al. (2003) J Biol Chem. 278(24):21566-75.
Vatsyayan J., et al. (2006) Biosci Biotechnol Biochem. 70(2):401-10.

## DATA

### SDS-PAGE




3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.