

UDP-glucose 4-epimerase/GALE Protein, Human (His)

Cat. No.:	HY-P70418
Synonyms:	rHuUDP-glucose 4-epimerase/GALE, His; UDP-Glucose 4-Epimerase; Galactowaldenase; UDP-Galactose 4-Epimerase; GALE
Species:	Human
Source:	E. coli
Accession:	Q14376-1 (M1-A348)
Gene ID:	2582
Molecular Weight:	Approximately 38.23 kDa

PROPERTIES

AA Sequence

MAEKVLVTGG	AGYIGSHTVL	ELLEAGYLPV	VIDNFHNAFR
GGGSLPESLR	RVQELTGRSV	EFEEMDILDQ	GALQRLFKKY
SFMAVIHFAG	LKAVGESVQK	PLDYRNVNLT	GTIQLLEIMK
AHGVKNLVFS	SSATVYGNPQ	YLPPLDEAHPT	GGCTNPYGKS
KFFIEEMIRD	LCQADKTWNA	VLLRYFNPTG	AHASGCIGED
PQGI PNNLMP	YVSQVAIGRR	EALNVFGNDY	DTEDGTGVRD
YIHVVDLAKG	HIAALRKLKE	QCGCRIYNLG	TGTGYSVLQM
VQAMEKASGK	KIPYKVVARR	EGDVAACYAN	PSLAQEELGW
TAAALGLDRMC	EDLWRWQKQN	PSGFGTQA	

Biological Activity The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance Solution.

Formulation Supplied as a 0.2 µm filtered solution of 50 mM Tris-HCl, 150 mM NaCl, 2 mM DTT, 1 mM EDTA, pH 8.0.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution N/A

Storage & Stability Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.

Shipping Shipping with dry ice.

DESCRIPTION

Background

UDP-glucose 4-epimerase (GALE) protein orchestrates two distinct yet analogous reactions: the reversible epimerization of UDP-glucose to UDP-galactose and the reversible epimerization of UDP-N-acetylglucosamine to UDP-N-

acetylgalactosamine. The conversion of UDP-glucose to UDP-galactose is crucial in the Leloir pathway of galactose catabolism, directing galactose into the glycolytic intermediate glucose 6-phosphate. GALE's role is pivotal in the breakdown of dietary galactose and facilitates the endogenous biosynthesis of UDP-Gal and UDP-GalNAc when external sources are limited. These UDP-sugar interconversions are integral to the intricate processes involved in the synthesis of glycoproteins and glycolipids, underscoring the significance of GALE in cellular glycan biosynthesis.

Caution: Product has not been fully validated for medical applications. For research use only.

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