

# Recombinant Human UDP-galactose-4-epimerase, His-tagged

**Cat. No.** GALE-731H    **Lot. No.** (See product label)

## SPECIFICATION

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>         | Recombinant humanGALE protein, fused to His-tag at N-terminus, was expressed in <i>E.coli</i> and purified by using conventional chromatography techniques. MW = 40.4 kDa (368aa).                                                                                                                                                                                                                                                                                                                                               |
| <b>Species</b>                  | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>                   | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>              | GALE, also known asUDP-glucose 4-epimeraes, is a protein that functions as the third enzyme in the Leloir pathway of galactose metabolism. It is a homodimeric epimerase found in bacterial, plant, and mammalian cells. This enzyme promotes the reverse chemical reaction, the conversion of UDP-glucose to UDP-galactose. UDP-galactose is used to build galactose-containing proteins and fats, which play critical roles in chemical signaling, building cellular structures, transporting molecules, and producing energy. |
| <b>Sequences Of Amino Acids</b> | MGSSHHHHH SSGLVPRGSH MAEKVLVTGG AGYIGSHTVL ELLEAGYLPV<br>VIDNFHNAFR GGGSLPESLR RVQELTGRSV EFEEMDILDQ GALQRLFKKY<br>SFMAVIHFAG LKAVGESVQK PLDYRVNLT GTIQLLEIMK AHGVKNLVFS<br>SSATVYGNPQ YLPLDEAHPT GGCTNPYGKS KFFIEEMIRD LCQADKTWNA<br>VLLRYFNPTG AHASGCIGED PQGIPNNLMP YVSQVAIGRR EALNVFGNDY<br>DTEDGTGVRD YIHVVDLAKG HIAALRKLKE QCGCRIYNLG TGTGYSVLQM<br>VQAMEKASGK KIPYKVVAR EGDVAACYAN PSLAQEELGW TAALGLDRMC<br>EDLWRWQKQN PSGFGTQA                                                                                           |

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|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>        | > 95% by SDS – PAGE.                                                                                                                                  |
| <b>Form</b>          | Liquid. In 20mM Tris-HCl buffer(pH 8.0) containing 10% glycerol 5mM DTT, 0.1M NaCl, and 1mM EDTA.                                                     |
| <b>Concentration</b> | 0.5 mg/ml (determined by Bradford assay).                                                                                                             |
| <b>Storage</b>       | Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles. |

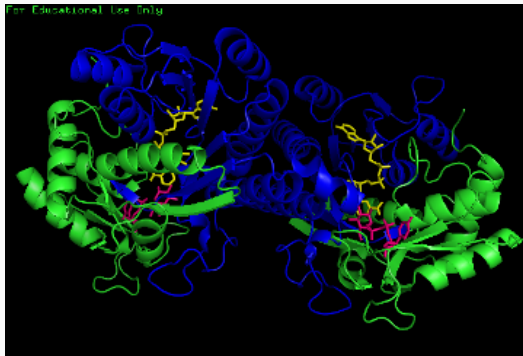
## GENE INFORMATION

|                            |                                                                                                                                                                                                                                                                                                          |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | GALE UDP-galactose-4-epimerase [ Homo sapiens ]                                                                                                                                                                                                                                                          |
| <b>Synonyms</b>            | GALE; UDP-galactose-4-epimerase; SDR1E1; FLJ95174; FLJ97302; UDP-glucose 4-epimerase; galactowaldenase; OTTHUMP00000002994; OTTHUMP000000037931; UDP-galactose 4-epimerase; UDP galactose-4"-epimerase; galactose-4-epimerase, UDP-; short chain dehydrogenase/reductase family 1E, member 1; EC 5.1.3.2 |
| <b>Gene ID</b>             | 2582                                                                                                                                                                                                                                                                                                     |
| <b>mRNA Refseq</b>         | NM_000403                                                                                                                                                                                                                                                                                                |
| <b>Protein Refseq</b>      | NP_000394                                                                                                                                                                                                                                                                                                |
| <b>MIM</b>                 | 606953                                                                                                                                                                                                                                                                                                   |
| <b>UniProt ID</b>          | Q14376                                                                                                                                                                                                                                                                                                   |
| <b>Chromosome Location</b> | 1p36-p35                                                                                                                                                                                                                                                                                                 |

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|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>Pathway</b>                               | Amino sugar and nucleotide sugar metabolism; Galactose metabolism; Metabolic pathways                              |
| <b>Function</b>                              | UDP-glucose 4-epimerase activity; binding; coenzyme binding; isomerase activity; protein homodimerization activity |
| <b>Structure of UDP-glucose 4-epimerase.</b> |                                  |