

# Recombinant Human GALE Protein, Myc/DDK-tagged, C13 and N15-labeled

**Cat. No.** GALE-2413H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Product Overview</b> | GALE MS Standard C13 and N15-labeled recombinant protein (NP_001121093) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | This gene encodes UDP-galactose-4-epimerase which catalyzes two distinct but analogous reactions: the epimerization of UDP-glucose to UDP-galactose, and the epimerization of UDP-N-acetylglucosamine to UDP-N-acetylgalactosamine. The bifunctional nature of the enzyme has the important metabolic consequence that mutant cells (or individuals) are dependent not only on exogenous galactose, but also on exogenous N-acetylgalactosamine as a necessary precursor for the synthesis of glycoproteins and glycolipids. Mutations in this gene result in epimerase-deficiency galactosemia, also referred to as galactosemia type 3, a disease characterized by liver damage, early-onset cataracts, deafness and cognitive disability, with symptoms ranging from mild ('peripheral' form) to severe ('generalized' form). Multiple alternatively spliced transcripts encoding the same protein have been identified. |
| <b>Molecular Mass</b>   | 38.3 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>AA Sequence</b>      | MAEKVLVTGGAGYIGSHTVLELLEAGYLPVVIDNFHNAFRGGGSLPESLRRVQELTGRSVEFEEMDILDQ GALQRLFKKYSFMAVIHFAGLKAVGESVQKPLDYRVNLTGTIQ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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LLEIMKAHGVKNLVFSSSATVYGNPQYLPLDEAHPTGGCTNPYGKSKFFIEEMIRDL  
CQADKTWNAVLLRYFNPTGAHASGCIGEDPQGIPNNLMPYVSQVAIGRREALNVFG  
NDYDTEDGTGVRDYIHVVDLAKGHIAALRKLKEQCGCRIYNLGTGTGYSVLQMVQA  
MEKASGKKIPYKVVARREGDVAACYANPSLAQEELGWTAAALGLDRMCEDLWRWQ  
KQNPSGFGTQATRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Purity** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Stability** Stable for 3 months from receipt of products under proper storage and handling conditions.

**Storage** Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

**Concentration** 50 µg/mL as determined by BCA

**Storage Buffer** 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

## GENE INFORMATION

**Gene Name** GALE UDP-galactose-4-epimerase [ Homo sapiens (human) ]

**Official Symbol** GALE

**Synonyms** GALE; UDP-galactose-4-epimerase; galactose 4 epimerase, UDP; UDP-glucose 4-epimerase; SDR1E1; short chain dehydrogenase/reductase family 1E; member 1; UDP glucose 4 epimerase; galactowaldenase; UDP-galactose 4-epimerase; UDP galactose-4-epimerase; galactose-4-epimerase, UDP-; short chain dehydrogenase/reductase family 1E, member 1; FLJ95174; FLJ97302;

**Gene ID** 2582

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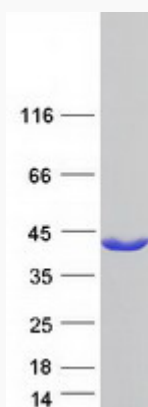
**mRNA Refseq** [NM\\_001127621](#)

**Protein Refseq** [NP\\_001121093](#)

**MIM** [606953](#)

**UniProt ID** [Q14376](#)

**SDS-PAGE**



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