

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

Cat. No. GALE-5810H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	GALE MS Standard C13 and N15-labeled recombinant protein (NP_001008217) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	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.
Molecular Mass	38.3 kDa
AA Sequence	MAEKVLVTGGAGYIGSHTVLELLEAGYLPVVIDNFHNAFRGGGSLPESLRRVQELTG RSVEFEEMDILDQ GALQRLFKKYSFMAVIHFAGLKAVGESVQKPLDYRVNLTGTIQ

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LLEIMKAHGVKNLVFSSSATVYGNPQYLPLDEAHPTGGCTNPYGKSKFFIEEMIRDL
CQADKTWNAVLLRYFNPTGAHASGCIGEDPQGIPNNLMPYVSQVAIGRREALNVFG
NDYDTEDGTGVRDYIHVVDLAKGHIAALRKLKEQCGCRIYNLGTGTGYSVLQMVQA
MEKASGKKIPYKVVARREGDVAACYANPSLAQEELGWTAALGLDRMCEDLWRWQ
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_001008216
Protein Refseq	NP_001008217
MIM	606953
UniProt ID	Q14376

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