

## Recombinant Human GFER, His-SUMO-tagged

Cat. No. GFER-216H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human GFER /ALR MS Standard Protein, C13 and N15-labeled (GFER, Heavy Labeled) Met 81 - Asp 205 (Accession # NP\_005253) was produced in human 293 cells (HEK293) with fully chemically defined cell culture medium to obtain >99% incorporation eff

**Species** Human

**Source** HEK293

**ProteinLength** 81-205 a.a.

### Description

Growth factor, augments liver regeneration (GFER) is also known as FAD-linked sulfhydryl oxidase ALR, which belongs to the Erv1/ALR family of proteins. This family can be found in higher and lower eukaryotes. There are two isoform of GFER: Isoform 1 and isoform 2. Isoform 2 missing 1 – 80 aa. Isoform 1 is mainly located in mitochondrion intermembrane space, while Isoform 1 is secreted to cytoplasm. Isoform 1 of GFER regenerates the redox-active disulfide bonds in CHCHD4/MIA40, a chaperone essential for disulfide bond formation and protein folding in the mitochondrial intermembrane space. The reduced form of CHCHD4/MIA40 forms a transient intermolecular disulfide bridge with GFER/ERV1, resulting in regeneration of the essential disulfide bonds in CHCHD4/MIA40, while GFER/ERV1 becomes re-oxidized by donating electrons to cytochrome c or molecular oxygen. The isoform 2 of GFER may act as an autocrine hepatotropic growth factor promoting liver regeneration.

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<b>Form</b>	Lyophilized from 0.22 µm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.
<b>Molecular Mass</b>	rh GFER, Heavy Labeled is fused with polyhistidine tag and SUMO tag at the N-terminus, and has a calculated MW of 27.3 kDa. The predicted N-terminus is Met 81. DTT-reduced Protein migrates as 33 kDa in SDS-PAGE .GFER, Heavy Labeled is labeled with [U- 13
<b>Endotoxin</b>	Less than 1.0 EU per µg of the rh GFER, Heavy Labeled by the LAL method.
<b>Purity</b>	>80% as determined by SDS-PAGE.
<b>Storage</b>	Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC); After reconstitution under sterile conditions for 3 months (-70oC).
<b>Reconstitution</b>	See Certificate of Analysis for reconstitution instructions and specific concentrations.

## GENE INFORMATION

<b>Gene Name</b>	GFER growth factor, augmenter of liver regeneration [ Homo sapiens ]
<b>Official Symbol</b>	GFER
<b>Synonyms</b>	GFER; growth factor, augmenter of liver regeneration; growth factor, erv1 (S. cerevisiae) like (augmenter of liver regeneration); FAD-linked sulfhydryl oxidase ALR; ALR; ERV1; ERV1 homolog (S. cerevisiae); HERV1; HPO1; HPO2; HSS; ERV1 homolog; hepatopoietin protein; erv1-like growth factor; hepatic regenerative stimulation substance; HPO;
<b>Gene ID</b>	2671

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<b>mRNA Refseq</b>	NM_005262
<b>Protein Refseq</b>	NP_005253
<b>MIM</b>	600924
<b>UniProt ID</b>	P55789
<b>Chromosome Location</b>	16p13.3-p13.12
<b>Pathway</b>	Metabolism of proteins, organism-specific biosystem; Mitochondrial Protein Import, organism-specific biosystem;
<b>Function</b>	growth factor activity; oxidoreductase activity; protein binding; thiol oxidase activity;

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