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, augmenter of 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 hepatotrophic growth factor promoting liver regeneration.

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Form	Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Molecular Mass	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
Endotoxin	Less than 1.0 EU per μg of the rh GFER, Heavy Labeled by the LAL method.
Purity	>80% as determined by SDS-PAGE.
Storage	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).
Reconstitution	See Certificate of Analysis for reconstitution instructions and specific concentrations.

GENE INFORMATION

Gene Name	GFER growth factor, augmenter of liver regeneration [Homo sapiens]
Official Symbol	GFER
Synonyms	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;
Gene ID	2671

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

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