

Recombinant Human Eukaryotic Translation Initiation Factor 2-alpha Kinase 3, GST-tagged

Cat. No. EIF2AK3-1010H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human EIF2AK3 (563-1115) was expressed in E. coli cells using an N-terminal GST tag.
Species	Human
Source	E.coli
ProteinLength	563-1115 a.a.
Description	EIF2AK3 phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2 (EIF2) leading to its inactivation and a rapid reduction of translational initiation and repression of global protein synthesis. EIF2AK3 is a type I membrane protein located in the endoplasmic reticulum (ER), where it is induced by ER stress caused by malformed proteins. EIF2AK3 plays a major role in the ability of cells to adapt to ER stress and is also involved in an integrated adaptive response to hypoxic stress in HeLa cells. EIF2AK3 functions in iron homeostasis and may play a role in hemolytic and inflammatory anemia.
Applications	Kinase Assay; Western Blot
Molecular Weight	115 kDa
Expression System	E.coli

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25 % glycerol.
Specific Activity	18 nmol/min/mg
Purity	> 90 %
Concentration	0.1 ug/ul
Sequences	563-1115
Storage	Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Pathways	Alzheimer"s disease; Diabetes pathways; Hepatitis C; Herpes simplex infection; Influenza A; Measles; PERK regulated gene expression; Protein processing in endoplasmic reticulum; Translation Factors; Unfolded Protein Response

GENE INFORMATION

Gene Name	EIF2AK3 eukaryotic translation initiation factor 2-alpha kinase 3 [Homo sapiens]
Official Symbol	EIF2AK3
Synonyms	EIF2AK3; eukaryotic translation initiation factor 2-alpha kinase 3; PEK; WRS; PERK; DKFZp781H1925; hsPEK; OTTHUMP00000207186; OTTHUMP00000207187; OTTHUMP00000207188; pancreatic EIF2-alpha kinase; PRKR-like endoplasmic reticulum kinase; eukaryotic translation initiation factor 2 alpha kinase 3; EC 2.7.11.1
Gene ID	9451

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mRNA Refseq	NM_004836
Protein Refseq	NP_004827
MIM	604032
UniProt ID	Q9NZJ5
Chromosome Location	2p12
Function	ATP binding; eukaryotic translation initiation factor 2alpha kinase activity; identical protein binding; nucleotide binding; protein binding; protein kinase activity; protein serine/threonine kinase activity

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