Active EIF2AK3, Human Recombinant

06/21

CATALOG NO: P1737-5 5 µg
P1737-10 10 µg

ALTERNATE NAMES: Eukaryotic Translation Initiation Factor 2 Alpha Kinase 3; PERK; PEK; HsPEK; WRS

MOL. WT. 125 kDa (calculated); 115 kDa (observed)

NCBI GENE ID: 9451

ACCESSION NO.: Q9NZJ5

PURITY: ≥ 70% by SDS-PAGE

SOURCE: *E. coli*

AMINO ACID SEQUENCE: Amino acids 563 to 1115 with N-terminal GST tag

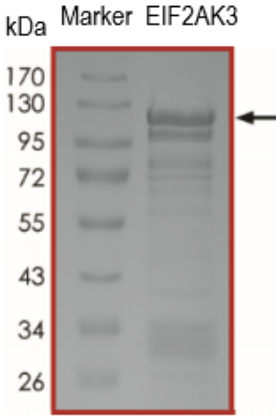
SPECIFIC ACTIVITY: ≥ 15 nmol/min/mg as determined by the incorporation of Phosphorus-33-containing ATP into a SMAD3 protein substrate

FORM: Liquid

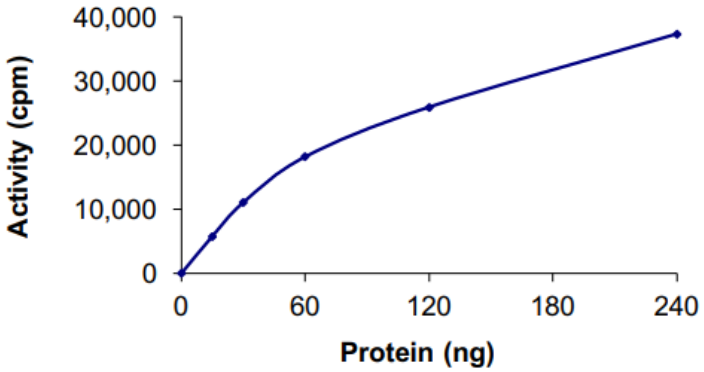
FORMULATION: Liquid in 50 mM Tris-HCl (pH 7.5), 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25% glycerol

STORAGE CONDITIONS: Aliquot and store protein solution at -70 °C. Avoid repeated freeze-thaw cycles.

DESCRIPTION: EIF2AK3 (Eukaryotic Translation Initiation Factor 2 Alpha Kinase 3), also known as PERK, is a metabolic-stress sensing protein kinase that phosphorylates and inactivates the alpha subunit of eukaryotic translation initiation factor 2 in response to various stress conditions. The action of EIF2AK3 directly results in a rapid reduction of translational initiation and protein synthesis. EIF2AK3 acts in response to various stress conditions such as low amino acid availability and misfolded proteins, and is thought to control mitochondrial morphology and function. Mutations in EIF2AK3 are associated with Wolcott-Rallison syndrome.



Active human EIF2AK3 was loaded on SDS-PAGE and visualized by Coomassie blue stain.



Representative kinase activity data for active human EIF2AK3 measuring incorporation of [^{33}P]-ATP into SMAD3 substrate protein.

RELATED PRODUCTS:

Creatine Kinase MT, Human Recombinant (Cat. No. P1578)
Human CellExp™ VAPB, Human Recombinant (Cat. No. P1135)
GSTO1, Human Recombinant (Cat. No. P1574)
Calreticulin, Human Recombinant (Cat. No. 7570)
Human Recombinant PP2C alpha (Cat. No. 6303)

FOR RESEARCH USE ONLY! Not to be used on humans.