

Product datasheet

Recombinant human PERK protein ab101115

5 Images

Description

| | | |
|-----------------------------------|--|--|
| Product name | Recombinant human PERK protein | |
| Biological activity | The specific activity of ab101115 was determined to be 18 nmol/min/mg by activity assay. | |
| Purity | > 90 % SDS-PAGE. The purity was determined to be >90% by densitometry | |
| Expression system | Escherichia coli | |
| Accession | Q9NZJ5 | |
| Protein length | Protein fragment | |
| Animal free | No | |
| Nature | Recombinant | |
| Species | Human | |
| Sequence | <p>NKYDSVSGEANDSSWNDIKNSGYISRYLTFEPIQCLG RGGFGVVFEAKN KVDDCNAYAIAKRIRLPNRELAREKVMREVKALAKLEHPG IVRYFNAWLEAP PEKWQEKMDEIMLKDESTDWPLSSPSPMDAPSVKIR RMDPFATKEHIEII APSPQRSRSFSVSGISCDQTSSSESQFSPLEFSGMDH EDISESVDAAYNLQ DSCLTDCDVEDGTMDGNDEGHSFELCPSEASPYVRS RERTSSSIFEDSG CDNASSKEEPKTNRLHIGHNCANKLTAFKPTSSKSSS EATLSISPPRPTT LSLDLTKNTTEKLQPSSPKVYLYIQMQLCRKENLKDWM NGRCTIEERERS VCLHIFLQIAEAVEFLHSKGLMHRDLKPSNIFFTMDDVV KVGDFGLVTAM DQDEEEQTVLTPMPAYARHTGQVGTKLYMSPEQIHGN SYSHKVDIFSLGL ILFELLYPFSTQMERVRTLTDVRNLKFPPLFTQKYPCEY VMVQDMLSPSP MERPEAINIENAVFEDLDFPGKTVLRQRSRSLSSSGTK HSRQSNNSHSP LPSN</p> | |
| Predicted molecular weight | 115 kDa including tags | |

Specifications

Our [Abpromise guarantee](#) covers the use of **ab101115** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| | |
|-------------------------|--|
| Applications | Western blot SDS-PAGE Functional Studies |
| Form | Liquid |
| Additional notes | ab61428 (Human Smad3 full length protein) can be utilized as a substrate for assessing Kinase activity |

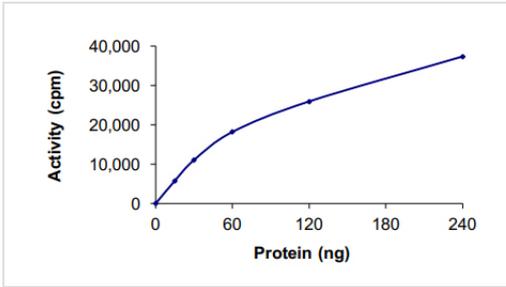
Preparation and Storage

| | |
|------------------------------|--|
| Stability and Storage | Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.307% Glutathione, 0.00174% PMSF, 0.00385% DTT, 0.79% Tris HCl, 0.00292% EDTA, 25% Glycerol, 0.87% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution. |
|------------------------------|--|

General Info

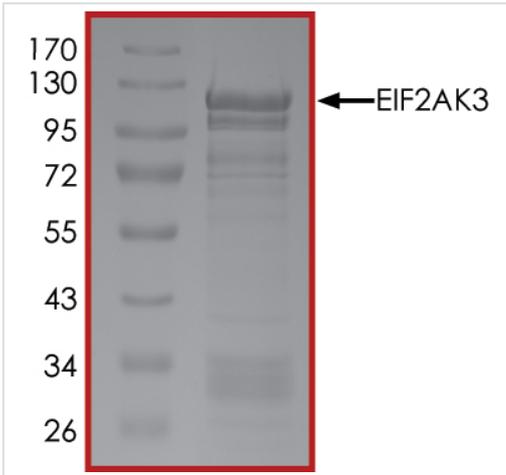
| | |
|---|--|
| Function | Phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2 (EIF2), leading to its inactivation and thus to a rapid reduction of translational initiation and repression of global protein synthesis. Serves as a critical effector of unfolded protein response (UPR)-induced G1 growth arrest due to the loss of cyclin D1. |
| Tissue specificity | Ubiquitous. A high level expression is seen in secretory tissues. |
| Involvement in disease | Defects in EIF2AK3 are the cause of Wolcott-Rallison syndrome (WRS) [MIM:226980]; also known as multiple epiphyseal dysplasia with early-onset diabetes mellitus. WRS is a rare autosomal recessive disorder, characterized by permanent neonatal or early infancy insulin-dependent diabetes and, at a later age, epiphyseal dysplasia, osteoporosis, growth retardation and other multisystem manifestations, such as hepatic and renal dysfunctions, mental retardation and cardiovascular abnormalities. |
| Sequence similarities | Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. GCN2 subfamily. Contains 1 protein kinase domain. |
| Domain | The luminal domain senses perturbations in protein folding in the ER, probably through reversible interaction with HSPA5/BIP. |
| Post-translational modifications | Autophosphorylated. N-glycosylated. |
| Cellular localization | Endoplasmic reticulum membrane. |

Images



The specific activity of PERK (ab101115) was determined to be 16 nmol/min/mg as per activity assay protocol

Functional Studies - Recombinant human PERK protein (ab101115)



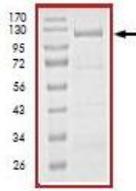
SDS PAGE analysis of ab101115

SDS-PAGE - Recombinant human PERK protein (ab101115)



SDS PAGE analysis of ab101115

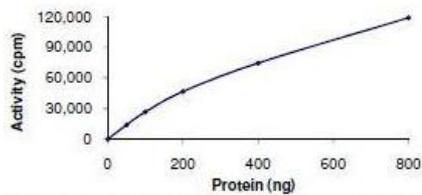
SDS-PAGE - Recombinant human PERK protein (ab101115)



SDS-PAGE - Recombinant human PERK protein (ab101115)

The purity of ab101115 was determined to be 90% by densitometry.

Approximate MWt: 115kDa



Functional Studies - Recombinant human PERK protein (ab101115)

The specific activity of ab101115 was determined to be 18 nmol/min/mg by activity assay.

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