

# Recombinant human ERK5 protein ab126913

[1 References](#) [5 Images](#)

### Description

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<b>Product name</b>	Recombinant human ERK5 protein
<b>Biological activity</b>	The specific activity of ab126913 was determined to be 11 nmol/min/mg
<b>Purity</b>	> 75 % Densitometry. Purity was determined to be >75% by densitometry. Affinity purified.
<b>Expression system</b>	Baculovirus infected Sf9 cells
<b>Accession</b>	<b><u>Q13164</u></b>
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Human
<b>Predicted molecular weight</b>	132 kDa including tags
<b>Amino acids</b>	1 to 816

### Specifications

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Our **Abpromise guarantee** covers the use of **ab126913** in the following tested applications.

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

<b>Applications</b>	Functional Studies Western blot SDS-PAGE
<b>Form</b>	Liquid
<b>Additional notes</b>	<b><u>ab64311</u></b> (Myelin Basic Protein protein) can be utilized as a substrate for assessing kinase activity

### Preparation and Storage

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<b>Stability and Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.50 Constituents: 0.31% Glutathione, 0.002% PMSF, 0.004% DTT, 0.79% Tris HCl, 0.003% EDTA, 25% Glycerol, 0.88% Sodium chloride
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This product is an active protein and may elicit a biological response in vivo, handle with caution.

## General Info

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### Function

Plays a role in various cellular processes such as proliferation, differentiation and cell survival. The upstream activator of MAPK7 is the MAPK kinase MAP2K5. Upon activation, it translocates to the nucleus and phosphorylates various downstream targets including MEF2C. EGF activates MAPK7 through a Ras-independent and MAP2K5-dependent pathway. May have a role in muscle cell differentiation. May be important for endothelial function and maintenance of blood vessel integrity. MAP2K5 and MAPK7 interact specifically with one another and not with MEK1/ERK1 or MEK2/ERK2 pathways.

### Tissue specificity

Expressed in many adult tissues. Abundant in heart, placenta, lung, kidney and skeletal muscle. Not detectable in liver.

### Sequence similarities

Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. MAP kinase subfamily.

Contains 1 protein kinase domain.

### Domain

The second proline-rich region may interact with actin targeting the kinase to a specific location in the cell.

The TXY motif contains the threonine and tyrosine residues whose phosphorylation activates the MAP kinases.

### Post-translational modifications

Dually phosphorylated on Thr-219 and Tyr-221, which activates the enzyme (By similarity).

Autophosphorylated in vitro on threonine and tyrosine residues when the C-terminal part of the kinase, which could have a regulatory role, is absent.

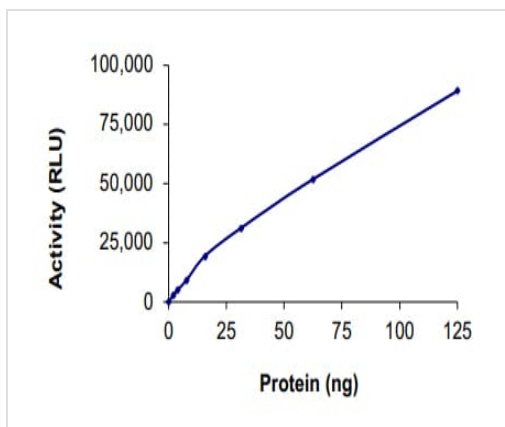
### Cellular localization

Cytoplasm. Nucleus. Translocates to the nucleus upon activation.

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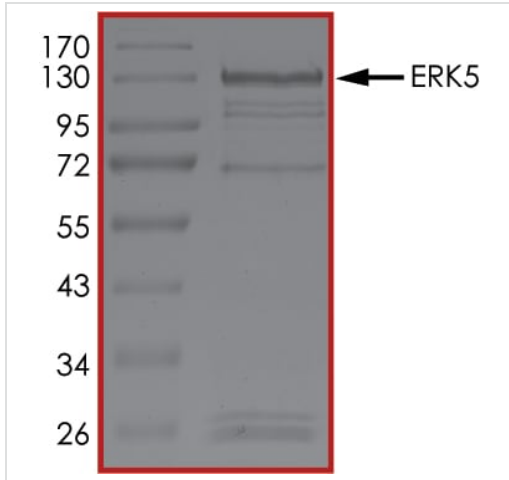
## Images

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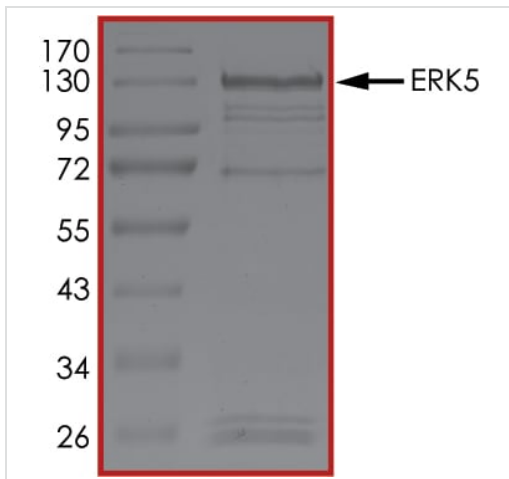
The specific activity of ERK5 (ab126913) was determined to be 2.5 nmol/min/mg as per activity assay protocol and was equivalent to 12.7 nmol/min/mg as per radiometric assay

Functional Studies - Recombinant human ERK5 protein (ab126913)



SDS PAGE analysis of ab126913

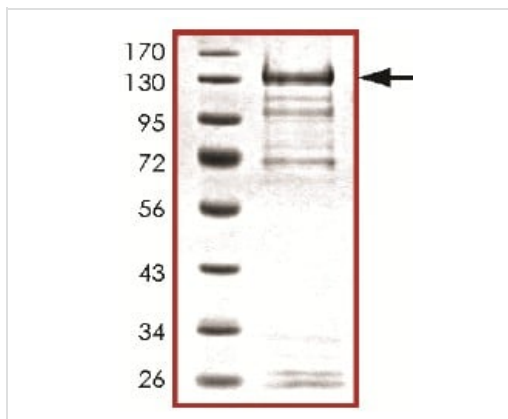
SDS-PAGE - Recombinant human ERK5 protein  
(ab126913)



SDS PAGE analysis of ab126913

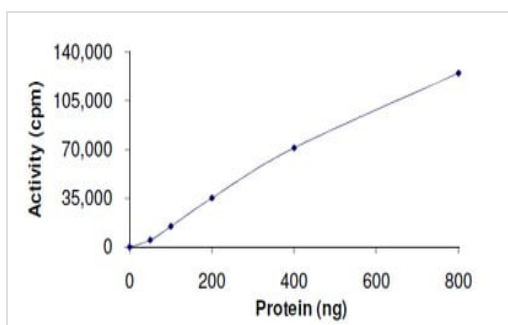
SDS-PAGE - Recombinant human ERK5 protein  
(ab126913)

SDS-PAGE using ab126913



SDS-PAGE - Recombinant human ERK5 protein (ab126913)

The specific activity of ab126913 was determined to be 11 nmol/min/mg



Functional Studies - Recombinant human ERK5 protein (ab126913)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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