

Recombinant human ULK1 protein ab125656

5 图像

描述

产品名称	重组人ULK1蛋白
生物活性	The specific activity of ab125656 was determined to be 50 - 56 nmol/min/mg.
纯度	> 70 % Densitometry. Purity was determined to be >70% by densitometry. Affinity purified.
表达系统	Baculovirus infected Sf9 cells
Accession	<u>O75385</u>
蛋白长度	Protein fragment
无动物成分	No
性质	Recombinant
种属	Human
预测分子量	125 kDa including tags
氨基酸	1 to 649
标签	GST tag N-Terminus

技术指标

Our **Abpromise guarantee** covers the use of **ab125656** in the following tested applications.

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

应用	Western blot Functional Studies SDS-PAGE
形式	Liquid
补充说明	ab64311 (Myelin Basic Protein protein) can be utilized as a substrate for assessing kinase activity

制备和贮存

稳定性和存储	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,
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25% Glycerol (glycerin, glycerine), 0.88% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

常规信息

功能

Serine/threonine-protein kinase involved in autophagy in response to starvation. Acts upstream of phosphatidylinositol 3-kinase PIK3C3 to regulate the formation of autophagophores, the precursors of autophagosomes. Part of regulatory feedback loops in autophagy: acts both as a downstream effector and negative regulator of mammalian target of rapamycin complex 1 (mTORC1) via interaction with RPTOR. Activated via phosphorylation by AMPK and also acts as a regulator of AMPK by mediating phosphorylation of AMPK subunits PRKAA1, PRKAB2 and PRKAG1, leading to negatively regulate AMPK activity. May phosphorylate ATG13/KIAA0652 and RPTOR; however such data need additional evidences. Plays a role early in neuronal differentiation and is required for granule cell axon formation. May also phosphorylate SESN2 and SQSTM1 to regulate autophagy (PubMed:25040165).

组织特异性

Ubiquitously expressed. Detected in the following adult tissues: skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung.

序列相似性

Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. APG1/unc-51/ULK1 subfamily.

Contains 1 protein kinase domain.

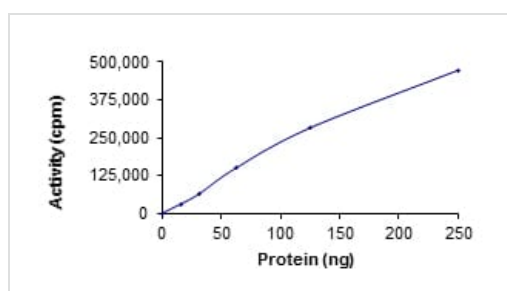
翻译后修饰

Autophosphorylated. Phosphorylated under nutrient-rich conditions; dephosphorylated during starvation or following treatment with rapamycin. Under nutrient sufficiency, phosphorylated by MTOR/mTOR, disrupting the interaction with AMPK and preventing activation of ULK1 (By similarity). In response to nutrient limitation, phosphorylated and activated by AMPK, leading to activate autophagy.

细胞定位

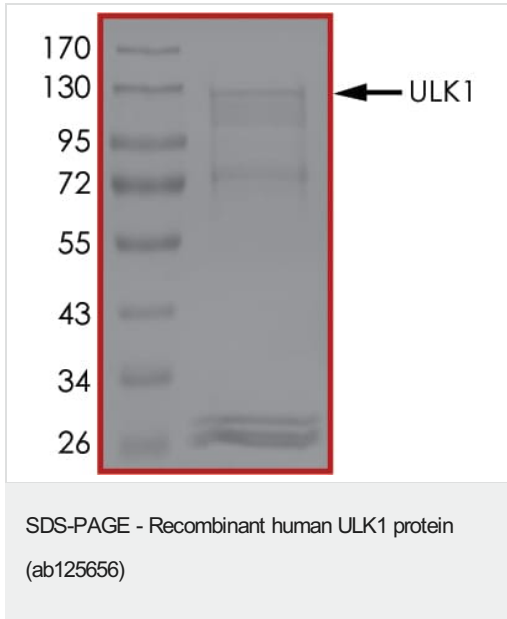
Cytoplasm, cytosol. Preautophagosomal structure. Under starvation conditions, is localized to punctate structures primarily representing the isolation membrane that sequesters a portion of the cytoplasm resulting in the formation of an autophagosome.

图片

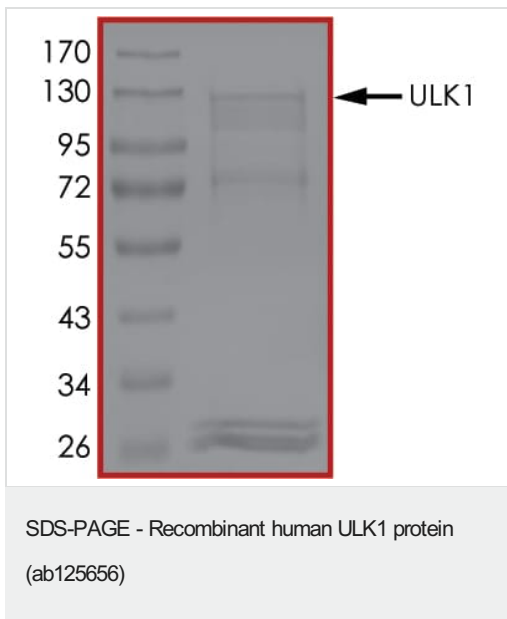


The specific activity of ULK1 (ab125656) was determined to be 53 nmol/min/mg as per activity assay protocol

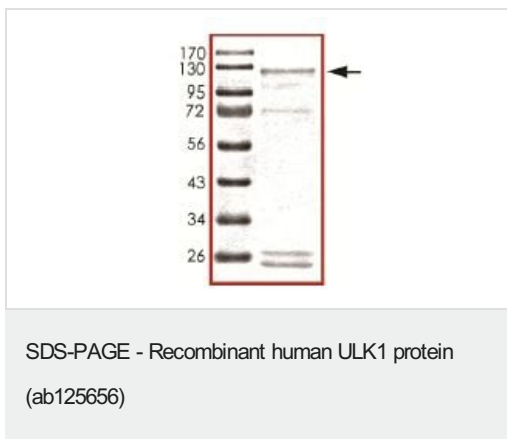
Functional Studies - Recombinant human ULK1 protein (ab125656)



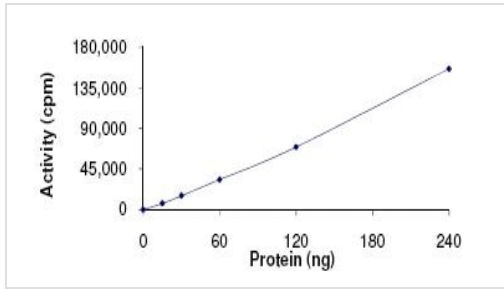
SDS PAGE analysis of ab125656



SDS PAGE analysis of ab125656



SDS-PAGE analysis of ab125656.



Sample Kinase Assay showing the specific activity of ab125656 as 50 nmol/min/mg.

Functional Studies - Recombinant human ULK1 protein (ab125656)

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