abcam

Product datasheet

Recombinant human MARK4 protein ab105211

1 References 5 Images

Description

Product name	Recombinant human MARK4 protein
Biological activity	The Specific activity of ab105211 was determined to be 1050 nmol/min/mg.
Purity	> 90 % SDS-PAGE. Purity was determined to be >90% by densitometry. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Accession	Q96L34
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	104 kDa including tags
Amino acids	1 to 752

Specifications

Our **Abpromise guarantee** covers the use of **ab105211** 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 Functional Studies SDS-PAGE
Form	Liquid
Additional notes	**ab204854** (Cdc25C peptide) can be utilized as a substrate for assessing kinase activity

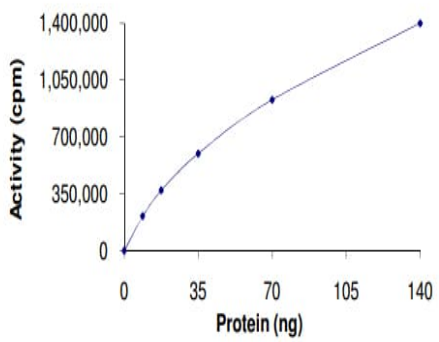
Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80ºC. 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 (glycerin, glycerine), 0.87% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

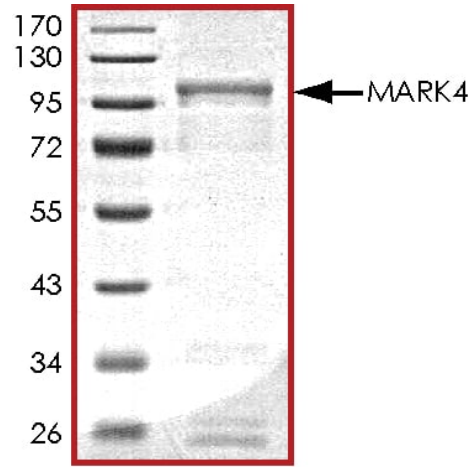
Function	Serine/threonine-protein kinase (PubMed:15009667, PubMed:14594945, PubMed:23666762, PubMed:23184942). Phosphorylates the microtubule-associated protein MAPT (PubMed:14594945, PubMed:23666762). Also phosphorylates the microtubule-associated proteins MAP2 and MAP4 (PubMed:14594945). Involved in regulation of the microtubule network, causing reorganization of microtubules into bundles (PubMed:14594945, PubMed:25123532). Required for the initiation of axoneme extension during cilium assembly (PubMed:23400999). Regulates the centrosomal location of ODF2 and phosphorylates ODF2 in vitro (PubMed:23400999). Plays a role in cell cycle progression, specifically in the G1/S checkpoint (PubMed:25123532). Reduces neuronal cell survival (PubMed:15009667). Plays a role in energy homeostasis by regulating satiety and metabolic rate (By similarity). Promotes adipogenesis by activating JNK1 and inhibiting the p38MAPK pathway, and triggers apoptosis by activating the JNK1 pathway (By similarity). Phosphorylates mTORC1 complex member RPTOR and acts as a negative regulator of the mTORC1 complex, probably due to disruption of the interaction between phosphorylated RPTOR and the RRAGA/RRAGC heterodimer which is required for mTORC1 activation (PubMed:23184942).
Tissue specificity	Ubiquitous. Isoform 2 is brain-specific (PubMed:11326310). Expressed at highest levels in brain and testis. Also expressed in heart, lung, liver, muscle, kidney and spleen (PubMed:14594945).
Sequence similarities	Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily. Contains 1 KA1 (kinase-associated) domain. Contains 1 protein kinase domain. Contains 1 UBA domain.
Developmental stage	Expressed at all stages of the mitotic cell cycle.
Post-translational modifications	Ubiquitinated with 'Lys-29'- and 'Lys-33'-linked polyubiquitins which appear to impede LKB1-mediated phosphorylation. Deubiquitinated by USP9X. Phosphorylated at Thr-214 by STK11/LKB1 in complex with STE20-related adapter-alpha (STRADA) pseudo kinase and CAB39 (PubMed:14976552). Phosphorylated throughout the cell cycle (PubMed:25123532).
Cellular localization	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center. Cytoplasm, cytoskeleton, cilium basal body. Cytoplasm, cytoskeleton, cilium axoneme. Cytoplasm. Localized at the tips of neurite-like processes in differentiated neuroblast cells. Detected in the cytoplasm and neuropil of the hippocampus.

Images



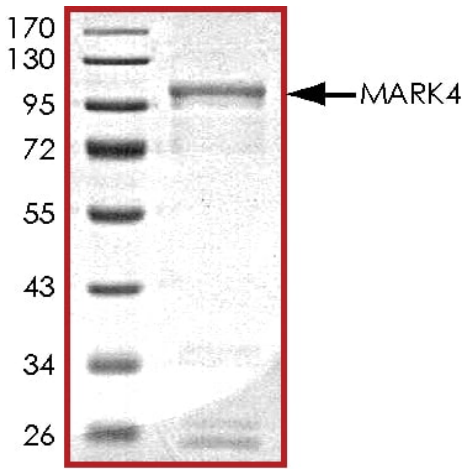
Functional Studies - Recombinant human MARK4 protein (ab105211)

The specific activity of MARK4 (ab105211) was determined to be 1140 nmol/min/mg as per activity assay protocol



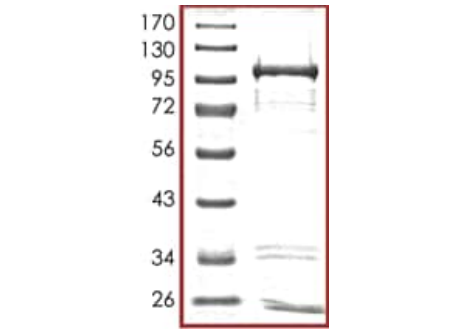
SDS-PAGE - Recombinant human MARK4 protein (ab105211)

SDS PAGE analysis of ab105211



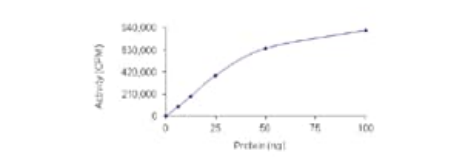
SDS-PAGE - Recombinant human MARK4 protein (ab105211)

SDS PAGE analysis of ab105211



SDS-PAGE - Recombinant human MARK4 protein (ab105211)

SDS-PAGE showing ab105211 at approximately 104kDa.



Functional Studies - Recombinant human MARK4 protein (ab105211)

The Specific activity of ab105211 was determined to be 1050 nmol/min/mg.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors