

Product datasheet

Recombinant human TAOK2 protein ab61426

4 Images

Description

| | |
|----------------------------|--------------------------------------------|
| Product name | Recombinant human TAOK2 protein |
| Biological activity | Specific activity: 104 nmol/min/mg. |
| Purity | > 85 % Densitometry. Affinity purified. |
| Expression system | Baculovirus infected Sf9 cells |
| Accession | <u>Q9UL54</u> |
| Protein length | Protein fragment |
| Animal free | No |
| Nature | Recombinant |
| Species | Human |
| Amino acids | 1 to 314 |

Specifications

Our **Abpromise guarantee** covers the use of **ab61426** in the following tested applications.

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

| | |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Applications | Functional Studies SDS-PAGE |
| Form | Liquid |
| Additional notes | <u>ab64311</u> (Myelin Basic Protein 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: 0.0038% EGTA, 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

Isoform 1, but not isoform 2, plays a role in apoptotic morphological changes, including cell contraction, membrane blebbing and apoptotic bodies formation. This function, which requires the activation of MAPK8/JNK and nuclear localization of C-terminally truncated isoform 1, may be linked to the mitochondrial CASP9-associated death pathway. Isoform 1, but not isoform 2, activates the JNK MAP kinase pathway through the specific activation of the upstream MKK3 and MKK6 kinases. Isoform 1 binds to microtubules and affects their organization and stability independently of its kinase activity. Prevents MAP3K7-mediated activation of IKKA, and thus NF-kappa-B activation, but not that of JNK. Phosphorylates itself, MBP, activated MAPK8 and tubulins. May play a role in the osmotic stress-MAPK8 pathway. Isoform 2, but not isoform 1, is required for PCDH8 endocytosis. Following homophilic interactions between PCDH8 extracellular domains, isoform 2 phosphorylates and activates MAPK14/p38 MAPK which in turn phosphorylates isoform 2. This process leads to PCDH8 endocytosis and CDH2 cointernalization (By similarity). Both isoforms are involved in MAPK14 phosphorylation.

Tissue specificity

Ubiquitously expressed, with a higher level of expression in testis and brain.

Sequence similarities

Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily. Contains 1 protein kinase domain.

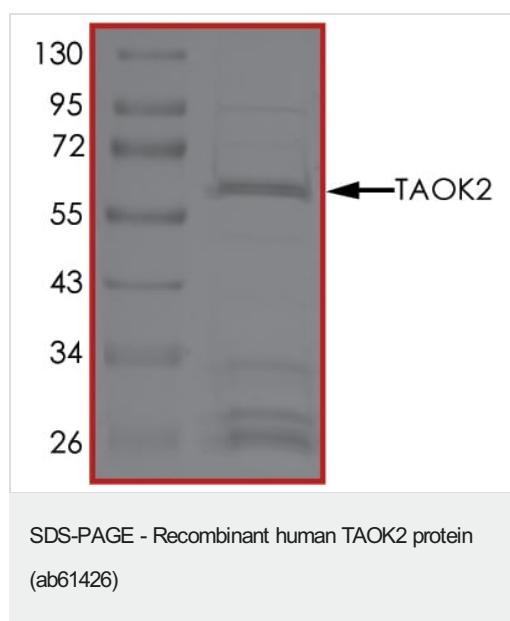
Post-translational modifications

Isoforms 1 and 2 are autophosphorylated. C-terminal cleavage of isoform 1 and subsequent nuclear localization requires CASP9 activity. isoform 2 is phosphorylated at 'Ser-1031' by MAPK14. This phosphorylation is required PCDH8 for endocytosis.

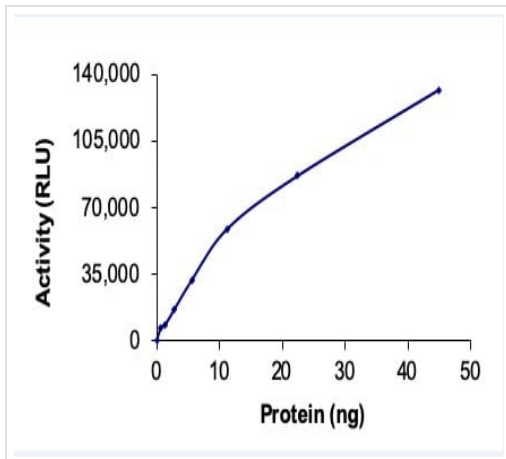
Cellular localization

Cytoplasmic vesicle membrane. Cytoplasm > cytoskeleton. Nucleus. Catalytically active full-length phosphorylated isoform 1 localizes to microtubules in the cytoplasm predominantly on microtubule cables positioned around the nucleus. A C-terminally truncated form of isoform 1 is present in the nucleus; isoform 2 and kinase-defective, as well as full-length isoform 1 are excluded from the nucleus and Cell projection > dendrite. In dendrites, colocalizes with PCDH8.

Images

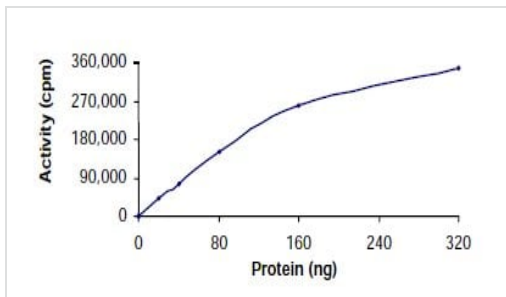


SDS PAGE analysis of ab61426

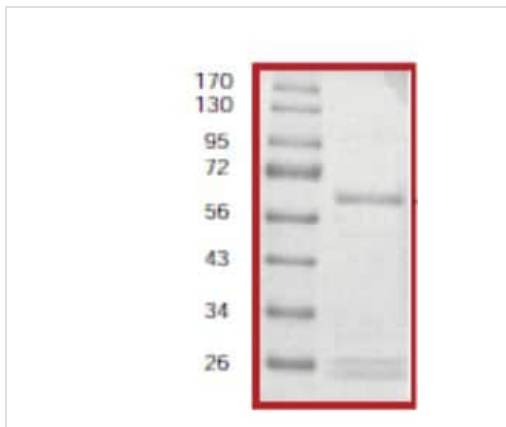


The specific activity of TAOK2 (ab61426) was determined to be 20 nmol /min/mg as per activity assay protocol.

Functional Studies - Recombinant human TAOK2 protein (ab61426)



Functional Studies - Recombinant human TAOK2 protein (ab61426)



SDS-PAGE - Recombinant human TAOK2 protein (ab61426)

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

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