

Product datasheet

Anti-TAOK2 antibody ab155595

2 Images

Overview

Product name	Anti-TAOK2 antibody
Description	Rabbit polyclonal to TAOK2
Host species	Rabbit
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Mouse, Human
Immunogen	Recombinant fragment corresponding to Human TAOK2 aa 69-350 (N terminal). Database link: Q9UL54
Positive control	Mouse brain whole cell lysate; HeLa cells.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.00</p> <p>Preservative: 0.01% Thimerosal (merthiolate)</p> <p>Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)</p>
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab155595 in the following tested applications.

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

Application	Abreviews	Notes
WB		1/500 - 1/3000. Predicted molecular weight: 138 kDa.
ICC/IF		1/100 - 1/1000.

Target

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.

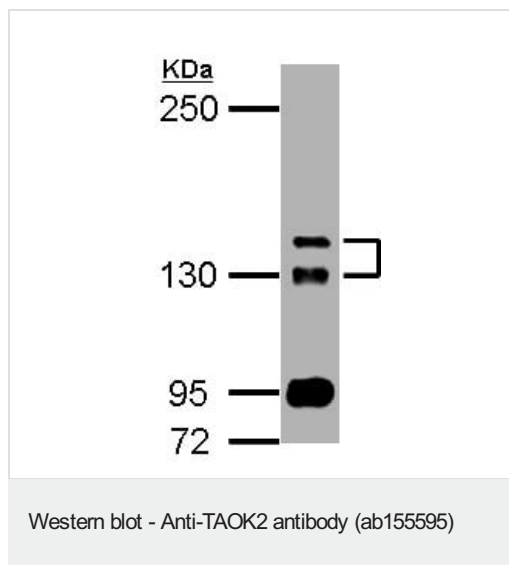
Post-translational modifications

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.

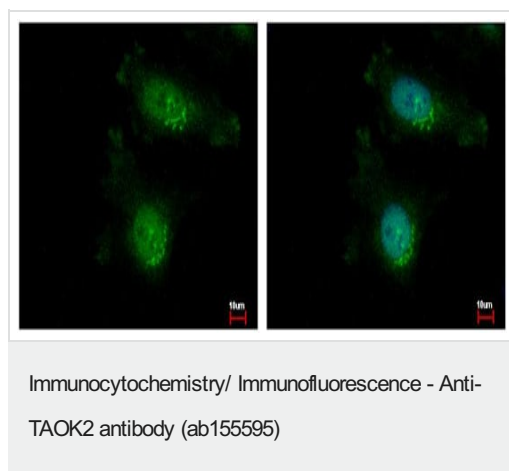
Images



Anti-TAOK2 antibody (ab155595) at 1/1000 dilution + Mouse brain whole cell lysate at 50 µg

Predicted band size: 138 kDa

5% SDS PAGE



Immunofluorescent analysis of 4% paraformaldehyde-fixed HeLa cells labeling TAOK2 with ab155595 at 1/500 dilution. Right-hand panel co-stained with Hoechst 33343.

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