10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-TAO1 Antibody

Catalog # AP60640

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q7L7X3
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	116070

Additional Information

Gene ID	57551
Other Names	KIAA1361; MAP3K16; MARKK; Serine/threonine-protein kinase TAO1; Kinase from chicken homolog B; hKFC-B; MARK Kinase; MARKK; Prostate-derived sterile 20-like kinase 2; PSK-2; PSK2; Prostate-derived STE20-like kinase 2; Thousand and one amino acid protein kinase 1; TAOK1; hTAOK1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human TAO1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

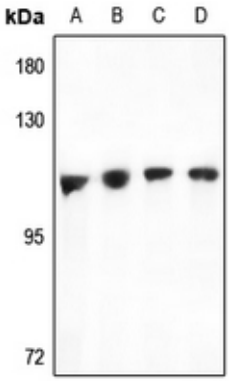
Name	TAOK1
Synonyms	KIAA1361, MAP3K16, MARKK
Function	Serine/threonine-protein kinase involved in various processes such as p38/MAPK14 stress-activated MAPK cascade, DNA damage response and regulation of cytoskeleton stability. Phosphorylates MAP2K3, MAP2K6 and MARK2. Acts as an activator of the p38/MAPK14 stress-activated MAPK cascade by mediating phosphorylation and subsequent activation of the upstream MAP2K3 and MAP2K6 kinases. Involved in G protein-coupled receptor signaling to p38/MAPK14. In response to DNA damage, involved in the G2/M transition DNA damage checkpoint by activating the p38/MAPK14 stress-activated MAPK cascade, probably by mediating phosphorylation of MAP2K3 and MAP2K6. Acts as a regulator of cytoskeleton stability by

phosphorylating 'Thr-208' of MARK2, leading to activate MARK2 kinase activity and subsequent phosphorylation and detachment of MAPT/TAU from microtubules. Also acts as a regulator of apoptosis: regulates apoptotic morphological changes, including cell contraction, membrane blebbing and apoptotic bodies formation via activation of the MAPK8/JNK cascade. Plays an essential role in the regulation of neuronal development in the central nervous system (PubMed:33565190). Also plays a role in the regulation of neuronal migration to the cortical plate (By similarity).

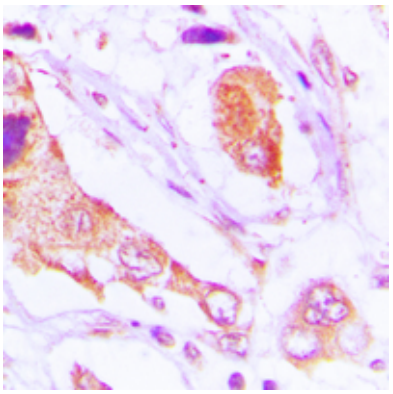
Cellular Location Cytoplasm.

Tissue Location Highly expressed in the testis, and to a lower extent also expressed in brain, placenta, colon and skeletal muscle

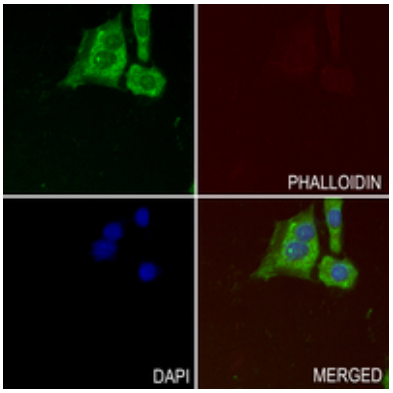
Images



Western blot analysis of TAO1 expression in HEK293T (A), A2780 (B), mouse testis (C), rat testis (D) whole cell lysates. (Predicted band size: 116 kD; Observed band size: 116 kD)

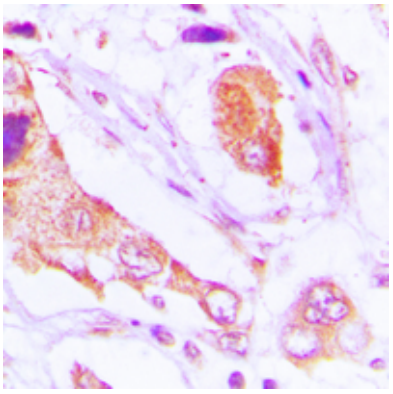


Immunohistochemical analysis of TAO1 staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of TAO1 staining in LS8 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Immunohistochemical analysis of TAO1 staining in human lung cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat



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