Anti-Phospho-Ser^{181} TAO2 Antibody

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Catalog #: p275-181 **Size:** 100 µl

Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Rabbit	WB 1:1000	H, M, R	A, C, X, Z	~120 kDa

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: *In vitro*, TAO (thousand and one amino acid) protein kinase 2 (TAO2) activates MAP/ERK kinases (MEKs) 3, 4, and 6 toward their substrates p38 MAP kinase JNK/SAPK (Chen et al., 1999; Chen and Cobb, 2001). This and more recent work has led to the proposal that the TAO protein kinases play an essential role in signaling from physiological agonists to the stress-responsive p38 MAPKs (Chen et al., 2003). Autophosphorylation of TAO may play a role in the mechanism of TAO activation. The MEK binding domain of TAO is autophosphorylated on both serine and threonine residues and Ser^{181} is located within this domain.

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser^{181} of TAO2.

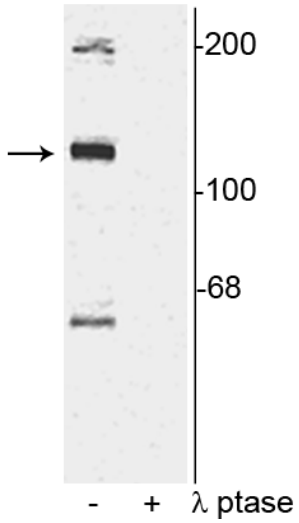
Antibody Specificity: Specific for endogenous levels of the ~120 kDa TAO2 phosphorylated at Ser^{181}. Immunolabeling is completely eliminated by treatment with λ-Ptase.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of rat cortical lysate showing specific immunolabeling of the ~120 kDa TAO2 phosphorylated at Ser^{181} in the first lane (-).Phosphospecificity is shown in the second lane (+) where the immunolabeling is completely eliminated by blot treatment with *lambda* phosphatase (λ-Ptase, 1200 units for 30 minutes).

Application Key: **WB** = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation
Species Reactivity Key: **All**-All Species **A**-Avian **Amp**-Amphibian **Ar**-*Arabidopsis* **B**-Bovine **C**-Canine **Ch**-Chicken **D**-*Drosophilia* **GP**-Guinea Pig **H**-Human **Ha**-Hamster **M**-Mouse **NHP**- Non-human primate **P**-Pig **R**-Rat **S**-Sheep **X**-*Xenopus* **Z**-Zebrafish
*Species assumed based on 100% homology with sequence used as antigen **For Research Use Only**

General References:

Chen Z, Raman M, Chen L, Lee SF, Gilman AG, Cobb MH (2003) TAO (thousand-and-one amino acid) protein kinases mediate signaling from carbachol to p38 mitogen-activated protein kinase and ternary complex factors. J Biol Chem 278:22278-22283.

Chen Z, Cobb, MH (2001) Regulation of stress-responsive mitogen-activated protein (MAP) kinase pathways by TAO2. J Biol Chem 276:16070-16075.

Chen Z, Hutchison M, Cobb MH (1999) Isolation of the protein kinase TAO2 and identification of its mitogen-activated protein kinase/extracellular signal-regulated kinase kinase binding domain. J Biol Chem 274:28803-28807.

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