Anti-Phospho-Ser\textsuperscript{181} TAO2

Catalog Number: p275-181  
Size: 100 µl

Product Description: Affinity purified rabbit polyclonal antibody

Applications: WB: 1:1000

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

Species reactivity: The antibody has been directly tested for reactivity in Western blots with human, mouse and rat tissue. It is anticipated that the antibody will react with canine, finch, \textit{Xenopus} and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: \textit{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\textsuperscript{181} is located within this domain.

\begin{center}
\textit{Western blot} of rat cortex lysate showing specific immunolabeling of the \textasciitilde120k TAO2 phosphorylated at Ser\textsuperscript{181} (Control). The phosphospecificity of this labeling is shown in the second lane (\textit{lambda}-phosphatase: \textit{\lambda}-Ptase). The blot is identical to the control except that it was incubated in \textit{\lambda}-Ptase (1200 units for 30 min) before being exposed to the Ser\textsuperscript{181} TAO2 antibody. The immunolabeling is completely eliminated by treatment with \textit{\lambda}-Ptase.
\end{center}
**Purification Method:** Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

**Antibody Specificity:** Specific for the ~120k TAO2 phosphorylated at Ser^{181} in Western blots. Immunolabeling is completely eliminated by treatment with λ phosphatase.

**Quality Control Tests:** Western blots performed on each lot.

**References:**

**WB = Western Blot  IF = Immunofluorescence  IHC = Immunohistochemistry  IP = Immunoprecipitation**

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

**Storage and Stability.** For long term storage –20°C is recommended. Stable at –20°C for at least 1 year.

**Shipment:** Domestic - Blue Ice; International – Blue Ice or Dry Ice.