

## Rabbit antibody to phospho-calcium/calmodulin-dependent protein kinase type II subunit alpha (alpha-CaMKII, Thr253) whole serum

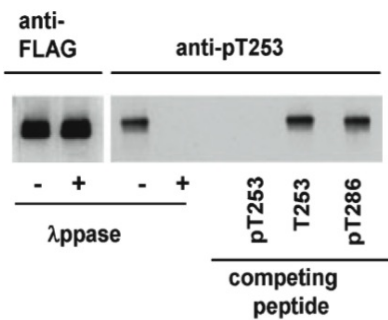
<b>Catalogue No.:</b>	R-1706-100
<b>Description:</b>	Calcium/calmodulin-stimulated protein kinase II (CaMKII) is composed of four different chains (alpha, beta, gamma, and delta) and is abundantly expressed in neurons. CaMKII is involved in regulating many aspects of neuronal function, including neurotransmitter synthesis and release, modulation of ion channel activity and cellular transport. The enzymatic function of CaMKII is regulated by its multiple phosphorylation sites and targeting to sub-cellular locations through interactions with protein binding partners. Phosphorylation of Thr253 has been identified in vivo and found to alter the interaction of CaMKII with binding partners, but not change its enzymatic activity. Thus, phosphorylation of Thr253 is suggested to modulate functional responses based on its binding partner and subsequently its sub-cellular localization.
<b>Batch No.:</b>	See product label
<b>Unit size:</b>	100 uL
<b>Antigen:</b>	A synthetic peptide (NKMLpTINPSC) corresponding to the sequence around Thr253 (AA 249-257) in alpha-CaMKII was synthesized, purified to 95% purity by HPLC, analyzed by mass spectroscopy and coupled to diphtheria toxoid.
<b>Antibody Type:</b>	Polyclonal
<b>Accession:</b>	P11275 KCC2A_RAT
<b>Produced in:</b>	Rabbit
<b>Purity:</b>	Whole serum
<b>Applications:</b>	Western Blotting (1:200 - 1:1000). Other applications have not been tested. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
<b>Specificity:</b>	Rat
<b>Cross-reactivity:</b>	Not tested. Predicted from gene analysis to react with human and mouse alpha-CaMKII.
<b>Form:</b>	Lyophilized
<b>Reconstitution:</b>	Reconstitute in 100 uL sterile distilled water. Centrifuge to remove any insoluble material.
<b>Storage:</b>	After reconstitution of lyophilised antibody, aliquot and store at -20C for a higher stability. Avoid freeze-thaw cycles.
<b>Expiry Date:</b>	12 months after purchase
<b>Specific References:</b>	<ol style="list-style-type: none"><li>1. Skelding KA et al (2012) J J Cereb Blood Flow Metab 32 (12), 2181-2192.</li><li>2. Skelding KA et al (2010) Cell Signal 22 (5), 759-769.</li><li>3. Gurd JW et al (2008) Brain Res 1218, 158-165.</li><li>4. Migues PV et al (2006) J Neurochem 98 (1), 289-299.</li></ol>
<b>General References:</b>	<ol style="list-style-type: none"><li>1. Skelding KA et (2011) Cell Cycle 10 (4), 631-639.</li><li>2. Dosemeci A &amp; Jaffe H (2010) Biochem Biophys Res Commun 391 (1), 78-84.</li><li>3. Skelding KA &amp; Rostas JAP (2009) Neurochem Res 34, 1792-1804.</li></ol>

---

FOR RESEARCH USE ONLY

## Rabbit antibody to phospho-calcium/calmodulin-dependent protein kinase type II subunit alpha (alpha-CaMKII, Thr253) whole serum

4. Dosemeci, A. et al (1994) J Biol Chem 269 (50), 31330-31333.



Western blot analysis of recombinant FLAG-alpha-CaMKII purified from transfected COS cells. Blots of wild-type CaMKII phosphorylated at Thr253 were treated with lambda phosphatase prior to probing with anti-pT253 or anti-FLAG antibody. The pT253 antibody was incubated with phospho-Thr253 (pT253, 50 nM), non-phospho-Thr253 (T253, 500 nM) or phospho-Thr286 (pT286, 50 nM) peptides prior to probing the western blots. Reference: Miguez PV et al (2006) J Neurochem 98 (1), 289-299.

biosensis

FOR RESEARCH USE ONLY