

## CaMKIIα/δ Polyclonal Antibody

<b>Catalog No :</b>	YT0623
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	CaMK2
<b>Fields :</b>	>>ErbB signaling pathway;>>Calcium signaling pathway;>>cAMP signaling pathway;>>HIF-1 signaling pathway;>>Oocyte meiosis;>>Necroptosis;>>Adrenergic signaling in cardiomyocytes;>>Wnt signaling pathway;>>Axon guidance;>>Circadian entrainment;>>Long-term potentiation;>>Neurotrophin signaling pathway;>>Cholinergic synapse;>>Dopaminergic synapse;>>Olfactory transduction;>>Inflammatory mediator regulation of TRP channels;>>Insulin secretion;>>GnRH signaling pathway;>>Melanogenesis;>>Oxytocin signaling pathway;>>Glucagon signaling pathway;>>Aldosterone synthesis and secretion;>>Cushing syndrome;>>Gastric acid secretion;>>Parkinson disease;>>Pathways of neurodegeneration - multiple diseases;>>Amphetamine addiction;>>Tuberculosis;>>Pathways in cancer;>>Proteoglycans in cancer;>>Glioma;>>Diabetic cardiomyopathy;>>Lipid and atherosclerosis
<b>Gene Name :</b>	CAMK2A/CAMK2D
<b>Protein Name :</b>	Calcium/calmodulin-dependent protein kinase type II subunit alpha/delta
<b>Human Gene Id :</b>	815/817
<b>Human Swiss Prot No :</b>	Q9UQM7/Q13557
<b>Mouse Gene Id :</b>	12322/108058
<b>Rat Gene Id :</b>	25400/24246
<b>Rat Swiss Prot No :</b>	P11275/P15791
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human CaMK2 alpha/delta. AA range:256-305

<b>Specificity :</b>	CaMKII $\alpha/\delta$ Polyclonal Antibody detects endogenous levels of CaMKII $\alpha/\delta$ protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:10000. Not yet tested in other applications.
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Observed Band :</b>	54kD
<b>Cell Pathway :</b>	ErbB_HER;Calcium;Oocyte meiosis;WNT;WNT-T CELLLong-term potentiation;Neurotrophin;Olfactory transduction;GnRH;Melanogenesis;Glioma;
<b>Background :</b>	<p>The product of this gene belongs to the serine/threonine protein kinases family, and to the Ca(2+)/calmodulin-dependent protein kinases subfamily. Calcium signaling is crucial for several aspects of plasticity at glutamatergic synapses. This calcium calmodulin-dependent protein kinase is composed of four different chains: alpha, beta, gamma, and delta. The alpha chain encoded by this gene is required for hippocampal long-term potentiation (LTP) and spatial learning. In addition to its calcium-calmodulin (CaM)-dependent activity, this protein can undergo autophosphorylation, resulting in CaM-independent activity. Two transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Nov 2008],</p>
<b>Function :</b>	<p>catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Autophosphorylation of Thr-286 allows the kinase to switch from a calmodulin-dependent to a calmodulin-independent state.,function:CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses it may regulate NMDAR-dependent potentiation of the AMPAR and synaptic plasticity.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily.,similarity:Contains 1 protein kinase domain.,subcellular location:Postsynaptic lipid rafts.,subunit:CAMK2 is composed of four different chains: alpha, beta, gamma, and delta. The different isoforms assemble into homo- or heteromultimeric</p>

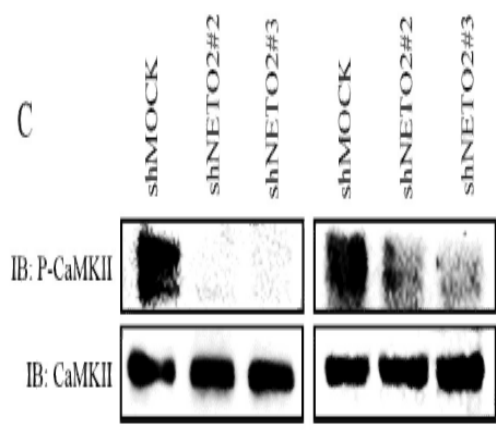
**Subcellular Location :**

Cell junction, synapse . Cell junction, synapse, postsynaptic density . Cell projection, dendritic spine . Cell projection, dendrite . Postsynaptic lipid rafts. .

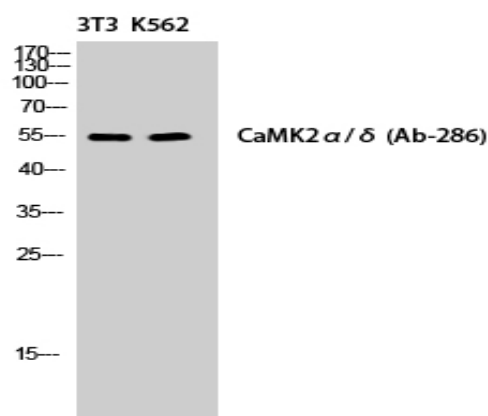
**Expression :**

Brain,

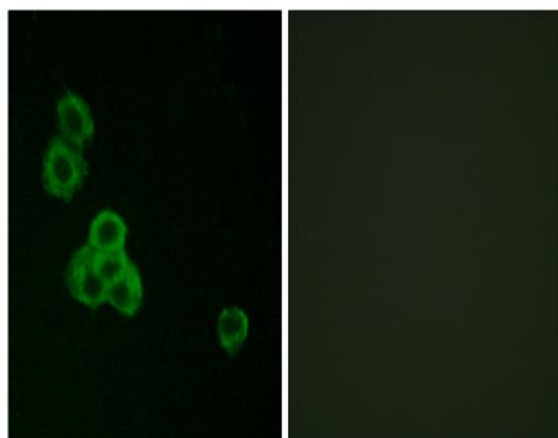
## Products Images



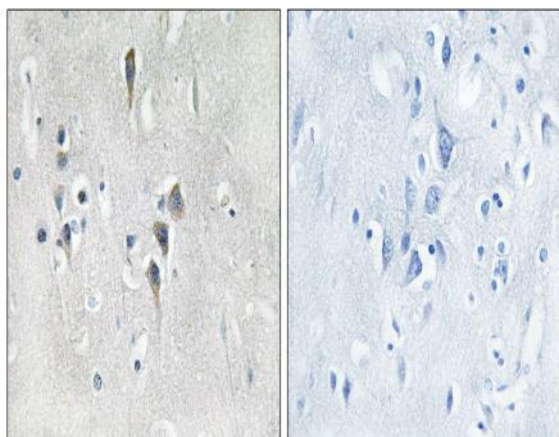
NETO2 promotes melanoma progression via activation of the Ca<sup>2+</sup>/CaMKII signaling pathway *Frontiers of Medicine* Cong Peng WB Human SK-Mel-5 cell, SK-Mel-28 cell, WM35 cell



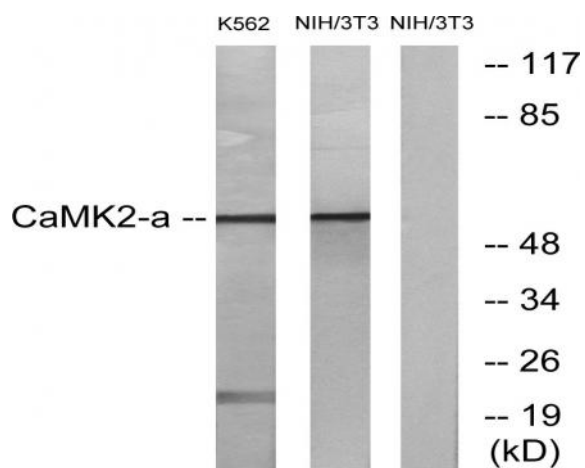
Western Blot analysis of NIH-3T3/K562 cells using CaMKII $\alpha$ / $\delta$  Polyclonal Antibody diluted at 1:500



Immunofluorescence analysis of MCF7 cells, using CaMK2 alpha/delta Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human brain tissue, using CaMK2 alpha/delta Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from NIH/3T3 and K562 cells, using CaMK2 alpha/delta Antibody. The lane on the right is blocked with the synthesized peptide.