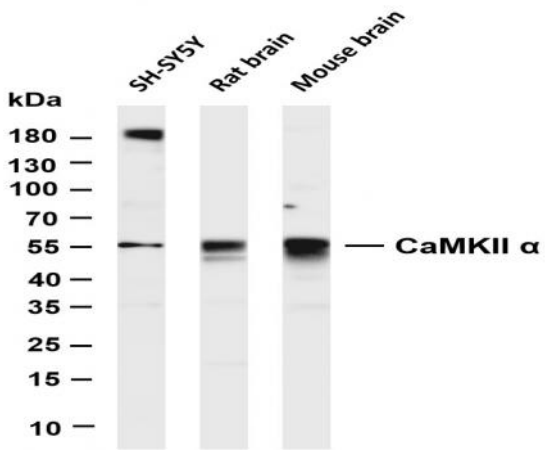
Best Tools for immunology Research

CaMKII α (PT0500R) PT® Rabbit mAb

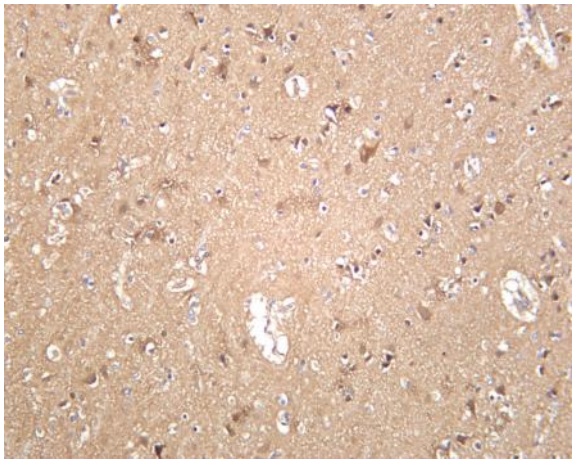
Catalog No :	YM8328
Reactivity :	Human; Mouse; Rat;
Applications :	WB;IHC;IF;IP;ELISA
Target :	KCC2A
Fields :	>>ErbB signaling pathway;>>Calcium signaling pathway;>>cAMP signaling pathway;>>HIF-1 signaling pathway;>>Oocyte meiosis;>>Necroptosis;>>Adrenergic signaling in cardiomyocytes;>>Wnt signaling 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
Gene Name :	CAMK2A CAMKA KIAA0968
Protein Name :	Calcium/calmodulin-dependent protein kinase type II subunit alpha (CaM kinase II subunit alpha) (CaMK-II subunit alpha) (EC 2.7.11.17)
Human Gene Id :	815
Human Swiss Prot No :	Q9UQM7
Mouse Gene Id :	12322
Mouse Swiss Prot No :	P11798
Rat Gene Id :	12322
Rat Swiss Prot No :	P11275

Specificity :	endogenous
Formulation :	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source :	Monoclonal, rabbit, IgG, Kappa
Dilution :	IHC 1:200-1:1000;WB 1:2000-1:10000;IF 1:200-1:1000;ELISA 1:5000-1:20000;IP 1:50-1:200;
Purification :	Protein A
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Molecularweight :	54kD
Observed Band :	54kD
Background :	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. Several transcript variants encoding distinct isoforms have been identified for this gene. [provided by RefSeq, Jun 2018]
Function :	FUNCTION: Calcium/calmodulin-dependent protein kinase that functions autonomously after Ca(2+)/calmodulin-binding and autophosphorylation, and is involved in various processes, such as synaptic plasticity, neurotransmitter release and long-term potentiation . Member of the NMDAR signaling complex in excitatory synapses, it regulates NMDAR-dependent potentiation of the AMPAR and therefore excitatory synaptic transmission (By similarity). Regulates dendritic spine development . Also regulates the migration of developing neurons . Phosphorylates the transcription factor FOXO3 to activate its transcriptional activity . Phosphorylates the transcription factor ETS1 in response to calcium signaling, thereby decreasing ETS1 affinity for DNA (By similarity). In response to interferon-gamma (IFN-gamma) stimulation, catalyzes phosphorylation of STAT1, stimulating the JAK-STAT signaling pathway . In
Subcellular Location :	Synapse

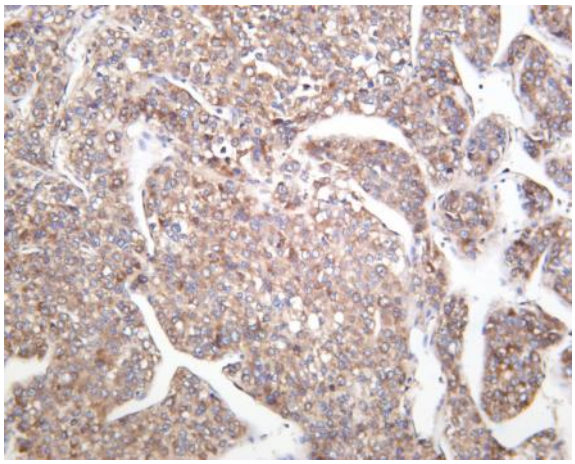
Products Images



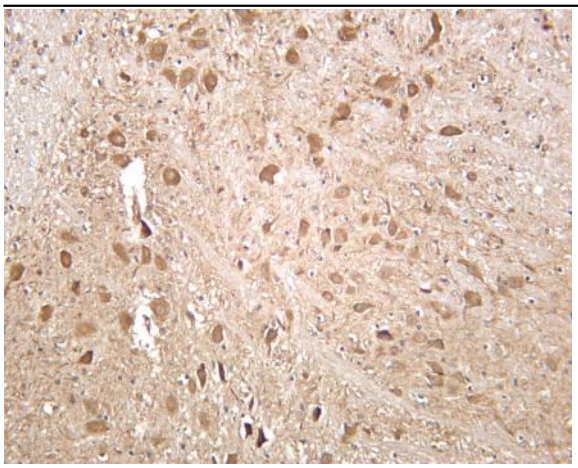
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-CaMKII α (PT0500R) antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: SH-SY5Y Lane 2: Rat brain Lane 3: Mouse brain Predicted band size: 54kDa Observed band size: 54kDa



Human brain was stained with anti-CaMKII α (PT0500R) rabbit antibody



Human hepatocellular carcinoma was stained with anti-CaMKII α (PT0500R) rabbit antibody



Mouse brain was stained with anti-CaMKII α (PT0500R) rabbit antibody