Phospho-PKC Isoform Sampler Kit

E051041

Kits Includes	Cat.	Quantity	Application	Reactivity	Source
PKCβ(Phospho-Thr641) Antibody	E011172-1	50μg/50μl	IHC, WB	Human, Mouse, Rat	Rabbit
PKCδ (Phospho-Ser645) Antibody	E011296-1	50μg/50μl	IHC, WB	Human, Mouse, Rat	Rabbit
PKCθ(Phospho-Ser695) Antibody	E011173-1	50μg/50μl	IHC	Human, Mouse, Rat	Rabbit
PKCθ(Phospho-Ser676) Antibody	E011297-1	50μg/50μl	IHC, WB	Human, Mouse, Rat	Rabbit
PKD/PKCμ (Phospho-Ser738) Antibody	E011078-1	50μg/50μl	WB	Human, Mouse, Rat	Rabbit

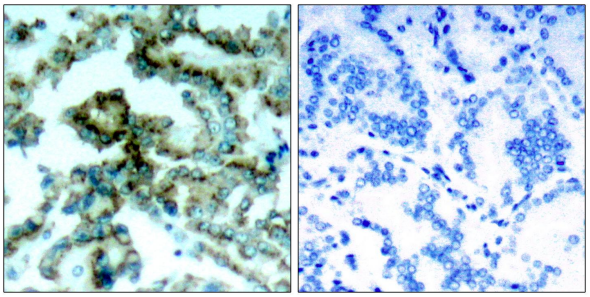
Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and the second messenger diacylglycerol. PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways, also serve as major receptors for phorbol esters, a class of tumor promoters. Each member of the PKC family is believed to play a distinct role. The protein encoded by this gene is one of the PKC family members. It is a calcium-independent and phospholipid-dependent protein kinase. This kinase is important for T-cell activation. It is required for the activation of the transcription factors NF-kappaB and AP-1, and may link the T cell receptor (TCR) signaling complex to the activation of the transcription factors. This is a calcium-independent, phospholipid-dependent, serine- and threonine-specific enzyme. Essential for T-cell receptor (TCR)-mediated T-cell activation, but is dispensable during TCR-dependent thymocyte development. Links the TCR signaling complex to the activation of NF-kappa-B in mature T lymphocytes. Required for interleukin-2 (IL2) production. PKC is activated by diacylglycerol which in turn phosphorylates a range of cellular proteins. PKC also serves as the receptor for phorbol esters, a class of tumor promoters.

Protein kinase C (PKC) refers to a family of serine/threonine protein kinases grouped by their activation mechanism. Classical or conventional PKCs (cPKC alpha-, betaI- , betaII- and gamma-) are activated by phosphatidylserine in a calcium dependent manner and can bind diacylglycerol (DAG). The Ca2+ insensitive novel PKCs (nPKCs epsilon-, delta-, theta- and eta- isotypes) are also activated by DAG and phosphatidylserine. The atypical PKCs (aPKCs iota- and zeta-) are insensitive to Ca2+, DAG and phorbol esters. All PKCs isoforms consist of a highly conserved catalytic domain connected to a regulatory domain via a hinge region. The physiological roles of PKCs are vast. This due to PKC phosphorylation and activation of multiple target proteins, which are involved in signal transduction pathways including, but not limited to, receptor desensitization, modulation of membrane structure events, regulation of transcription, regulation of cell growth, immune responses, and in learning and memory. Autophosphorylation at Thr-219 is required for targeting to the TCR and cellular function of PKC upon antigen receptor ligation.

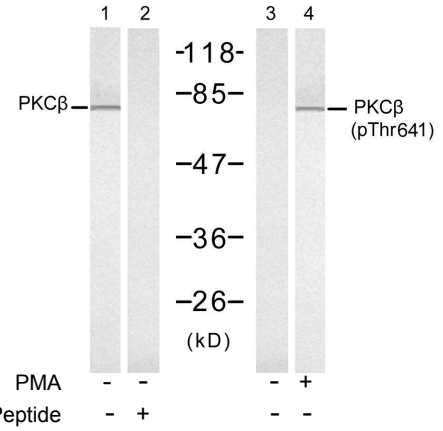
PKCβ (Phospho-Thr641) Antibody

E011172

Catalog Number:	E011172-1, E011172-2
Amount:	50μg/50μl, 100μg/100μl
Swiss-Prot No. :	P05771
Form of Antibody:	Rabbit IgG in phosphate buffered saline (without Mg^{2+} and Ca^{2+}), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage/Stability:	Store at -20℃/1 year
Immunogen:	The antiserum was produced against synthesized phosphopeptide derived from human PKCβ around the phosphorylation site of threonine 641 (E-L-T^P-P-T).
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatogramphy using non-phosphopeptide corresponding to the phosphorylation site.
Specificity/Sensitivity:	PKCβ (phospho-Thr641) antibody detects endogenous levels of PKCβ only when phosphorylated at threonine 641.
Reactivity:	Human, Mouse, Rat
Applications:	WB: 1:500~1:1000 IHC: 1:50-1:100
References:	Zhang Y, et al. (2006) Mol Cell Biol ; 26: 6748-6761 Castoria G, et al. (2004) Mol Cell Biol ; 24: 7643-7653 Marcil J, et al. (1999) Biochem J ; 337:185-192 Bornancin F, et al. (1996) Curr Biol ; 6:1114-1123.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue, using PKCβ antibody.

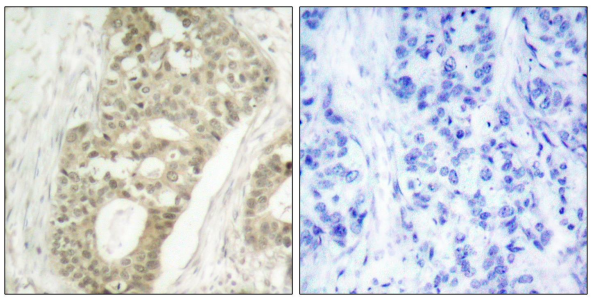


Western blot analysis of extracts from K562 cells, untreated or treated with PMA (1ng/ml, 10min), using PKCβ antibody and PKCβ (phospho-Thr641) antibody.

PKCδ (Phospho-Ser645) Antibody

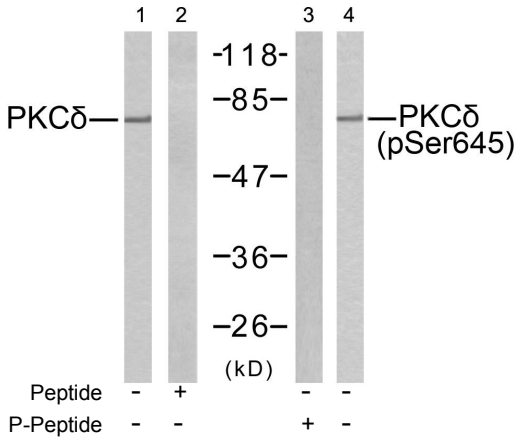
E011296

Catalog Number: E011296-1, E011296-2
Amount: 50μg/50μl, 100μg/100μl
Swiss-Prot No. : Q05655
All Names: PRKCD , Protein kinase C delta type
Form of Antibody: Rabbit IgG in phosphate buffered saline (without Mg^{2+} and Ca^{2+}), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage/Stability: Store at -20℃/1 year
Immunogen: The antiserum was produced against synthesized phosphopeptide derived from human PKCδ around the phosphorylation site of serine 645 (R-L-S^P-Y-S).
Purification: The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Specificity/Sensitivity: PKCδ (phospho-Ser645) antibody detects endogenous levels of PKCδ only when phosphorylated at serine 645.
Reactivity: Human, Mouse, Rat
Applications: WB: 1:500~1:1000 IHC: 1:50~1:100
References: Kei Sakamoto, et,al. (2003) Am J Physiol Endocrinol Metab ; 285: E1081 - E1088.
Ling Zhang, et,al. (2004) J. Biol. Chem ; 279: 28315 - 28319.
Kristof Van Kolen et,al. (2006) FEBS J ; 273: 1843 - 1854.
Martin Villalba, et,al. (2002) J. Cell Biol ; 157: 253.



P-Peptide - +

Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using PKCδ antibody.

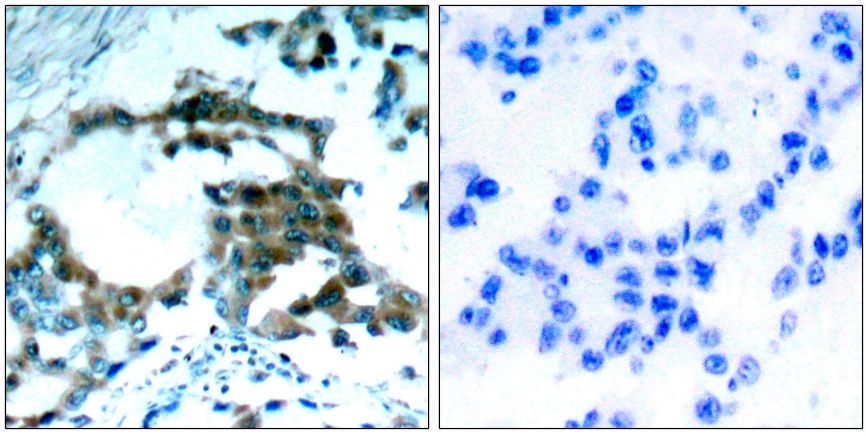


Western blot analysis of extracts from MCF7 cells using PKCδ antibody and PKCδ antibody.

PKCθ (Phospho-Ser695) Antibody

E011173

Catalog Number:	E011173-1, E011173-2
Amount:	50μg/50μl, 100μg/100μl
Swiss-Prot No. :	Q04759
Form of Antibody:	Rabbit IgG in phosphate buffered saline (without Mg^{2+} and Ca^{2+}), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage/Stability:	Store at -20℃/1 year
Immunogen:	The antiserum was produced against synthesized phosphopeptide derived from human PKCθ around the phosphorylation site of serine 695 (N-F-S^P-F-M).
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatogramphy using non-phosphopeptide corresponding to the phosphorylation site.
Specificity/Sensitivity:	PKCθ (phospho-Ser695) antibody detects endogenous levels of PKCθ only when phosphorylated at serine 695.
Reactivity:	Human, Mouse, Rat
Applications:	IHC: 1:50~1:100
References:	Xu ZB, et al.(2004) J Biol Chem 279:50401-50409 Thebault S, et al. (2004) Mol Immunol 40: 931-942



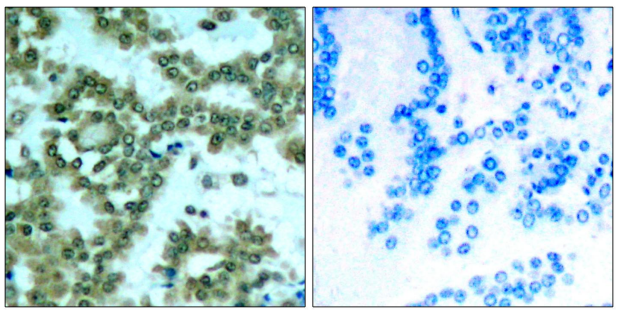
P-Peptide - +

Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue, using PKCθ antibody.

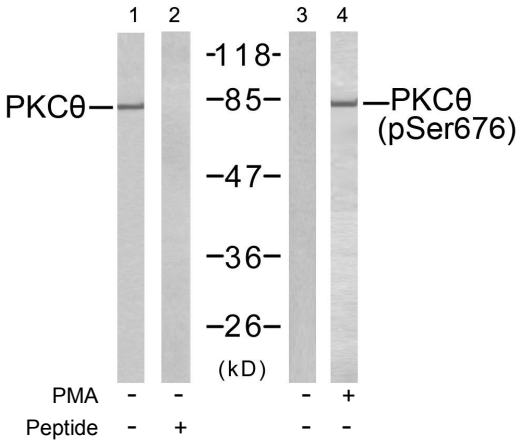
PKCθ (Phospho-Ser676) Antibody

E011297

Catalog Number: E011297-1, E011297-2
Amount: 50μg/50μl, 100μg/100μl
Swiss-Prot No. : Q04759
All Names: PRKCQ , Protein kinase C theta type
Form of Antibody: Rabbit IgG in phosphate buffered saline (without Mg^{2+} and Ca^{2+}), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage/Stability: Store at -20℃/1 year
Immunogen: The antiserum was produced against synthesized phosphopeptide derived from human PKCθ around the phosphorylation site of serine 676 (R-L-S^P-F-A).
Purification: The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Specificity/Sensitivity: PKCθ (phospho-Ser676) antibody detects endogenous levels of PKCθ only when phosphorylated at serine 676.
Reactivity: Human, Mouse, Rat
Applications: WB: 1:500~1:1000 IHC: 1:50~1:100
References: Kristof Van Kolen, et al. (2006) FEBS J ; 273: 1843 - 1854.
Martin Villalba, et al. (2002) J. Cell Biol ; 157: 253.
Jie Zhang, et al. (2004) J. Biol. Chem ; 279: 22118 - 22123.
Castro AF, et al. (1998) Am J Physiol Cell Physiol; 275: C113 - C119.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue, using PKCθ antibody.

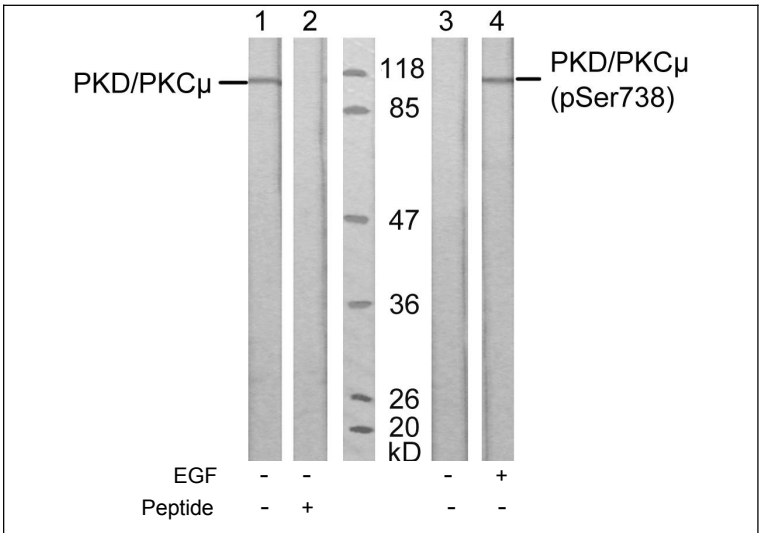


Western blot analysis of extract from Jurkat cells untreated or treated with PMA (1ng/ml, 5min), using PKCθ antibody and PKCθ antibody.

PKD/PKCμ (Phospho-Ser738) Antibody

E011078

Catalog Number: E011078-1, E011078-2
Amount: 50μg/50μl, 100μg/100μl
Swiss-Prot No. : Q15139
Form of Antibody: Rabbit IgG in phosphate buffered saline (without Mg^{2+} and Ca^{2+}), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage/Stability: Store at -20℃/1 year
Immunogen: The antiserum was produced against synthesized phosphopeptide derived from human PKD/PKCμ around the phosphorylation site of serine 738 (E-K-S^P-F-R).
Purification: The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Specificity/Sensitivity: PKD/PKCμ (phospho-Ser738) antibody detects endogenous levels of PKD/PKCμ only when phosphorylated at serine 738.
Reactivity: Human, Mouse, Rat
Applications: WB: 1:500~1:1000
References: Storz P, et al. Mol Cell Biol. 2004 Apr; 24(7): 2614-2626.
Storz P, et al. Mol Cell Biol. 2005 Oct; 25(19): 8520-8530.
Zhang W, et al. J Biol Chem 2005 May 13; 280(19): 19036-19044



Western blot analysis of extract from A431 cells, untreated or treated with EGF (200ng/ml, 10min), using PKD/PKCμ antibody and PKD/PKCμ antibody.