Technical Data Sheet

Purified Mouse Anti-PKCθ (pT538)

Product Information

Material Number: 612735 Size: 150 µg 250 μg/ml Concentration: 19/PKC Clone:

Phosphorylated Human PKCθ Peptide Immunogen:

Isotype: Mouse IgG2a Reactivity: QC Testing: Human

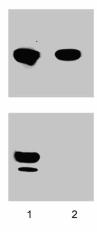
Target MW:

Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium

Description

The Protein Kinase C (PKC) family of homologous serine/threonine protein kinases is involved in a number of processes such as growth, differentiation, and cytokine secretion. Three categories exist, conventional PKC (cPKC), novel PKC (nPKC), and atypical PKC (aPKC). These proteins are products of multiple genes and alternative splicing and have different modes of activation. For example, cPKC's members (α, βΙ, βΙΙ, and γ) are calcium activated, phospholipid-dependent serine/threonine specific enzymes which can also be activated by phorbol esters. However, the novel PKC (nPKC) subfamily members (δ , ϵ , η , and θ isoforms) and the atypical PKC (PKC) subfamily members (ζ , i, and λ isoforms) are Ca[2+] independent. The aPKC members are unique in that their activity is independent of diacylglycerols and phorbol esters. The PKC pathway represents a major signal transduction system that is activated following ligand-stimulation of transmembrane receptors by hormones, neurotransmitters and growth factors. PKCθ transcripts are expressed in most tissues with the highest levels being found in hematopoietic tissues and cell lines, including T cells and thymocytes. PKCθ RNA is readily detectable in skeletal muscle, lung, and brain. However, PKCθ expression is not detected in several human carcinoma cell lines. Abundant expression of this PKC isozyme in hematopoietic cells suggests that it may have a role in growth and differentiation processes of these cells.

The 9/PKC monoclonal antibody recognizes the phosphorylated threonine 538 (pT538) of human PKC0.



Jurkat cells were treated with Anti-CD3 and were then either left untreated (lane 1) or treated (lane 2) with 200 U/ml of lambda phosphatase for 1 hr at 37°C. The top panel was probed with anti-PKCθ (Cat. No. 610089) and the bottom panel was probed with anti-PKCθ (pT538).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

Application Notes

Application

Application			
	Western blot	Routinely Tested	
	Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development	

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Suggested Companion Products

Catalog Number	Name	Size	Clone
610089	Purified Mouse Anti-Human PKCθ	50 μg	27/PKCθ

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Nishizuka Y. The molecular heterogeneity of protein kinase C and its implications for cellular regulation. *Nature*. 1988; 334(6184):661-665.(Biology) Soderling TR. Protein kinases. Regulation by autoinhibitory domains. *J Biol Chem*. 1990; 265(4):1823-1826.(Biology)

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