

DESCRIPTION

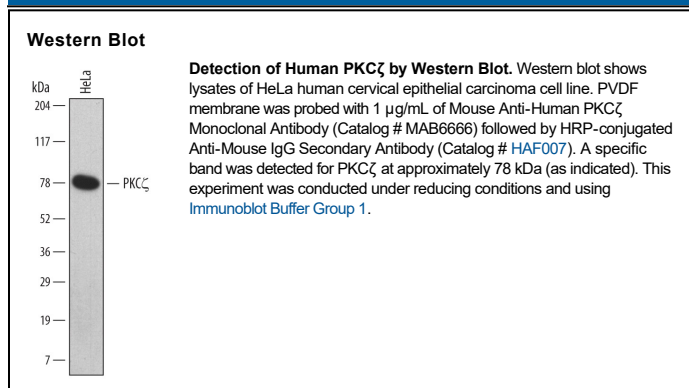
Species Reactivity	Human
Specificity	Detects human PKC ζ in direct ELISAs and Western blots. In direct ELISAs, less than 25% cross-reactivity with recombinant human (rh) PKC iota and rhPKC alpha and no cross-reactivity with rhPKC epsilon, eta, beta 1, beta 2, delta, gamma, nu, mu, or theta is observed. In Western blots, 100% cross-reactivity with recombinant human (rh) PKC iota and no cross-reactivity with rhPKC epsilon or eta is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 453513
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human PKC ζ Ile454-Val592 Accession # Q05513
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μ m filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	1 μ g/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

PKC ζ (protein kinase C-zeta, EC=2.7.11.13), also called PKC2, is a 592 amino acid (aa), 79 kDa member of the atypical PKC (aPKC) subfamily of Ser/Thr protein kinases. aPKC proteins can be activated by phorbol esters, but are insensitive to calcium and diacylglycerol. PKC ζ regulates cell polarity in early development, and is necessary for cytokine-induced chemotaxis of macrophages and cancer cells, chemokine-induced adhesion of neutrophils, and polarization of Th2 cells. It is activated by PDK1 phosphorylation, binds ceramide, and translocates to the plasma membrane where it regulates adherens and tight junction formation. PKC ζ contains an OPR domain (aa 15-98), a zinc finger region (aa 130-180), and a protein kinase domain (aa 252-518). PKC ζ potential variants of 409 or 539 aa have alternate start sites at aa 184 or aa 9 (also missing aa 186-233), respectively. Within the region used as an immunogen, human PKC ζ shares 98% aa identity with mouse and rat PKC ζ .