

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat PKC ϵ in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human PKC ϵ Gln580-Pro737 Accession # Q02156
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
Immunohistochemistry	5-15 μ g/mL	See Below
Simple Western	10 μ g/mL	Human brain (hippocampus) tissue

DATA

Western Blot

Detection of Human PKC ϵ by Western Blot. Western blot shows lysates of human brain (hippocampus) tissue and human brain (hypothalamus) tissue. PVDF membrane was probed with 1 μ g/mL of Sheep Anti-Human/Mouse/Rat PKC ϵ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5134) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # Catalog # HAF016). A specific band was detected for PKC ϵ at approximately 90 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Western Blot

Detection of Human/Mouse/Rat PKC ϵ by Western Blot. Western blot shows lysates of human, mouse, and rat brain tissue. PVDF membrane was probed with 1 μ g/mL of Human/Mouse/Rat PKC ϵ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5134) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # Catalog # HAF016). A specific band was detected for PKC ϵ at approximately 90 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry

PKC ϵ in Human Lung Cancer Tissue. PKC ϵ was detected in immersion fixed paraffin-embedded sections of human lung cancer tissue using Human/Mouse/Rat PKC ϵ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5134) at 15 μ g/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to nuclei. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Simple Western

Detection of Human PKC ϵ by Simple Western™. Simple Western shows lysates of human brain (hippocampus), loaded at 0.5 mg/ml. A specific band was detected for PKC ϵ at approximately 96 kDa (as indicated) using 10 μ g/mL of Sheep Anti-Human/Mouse/Rat PKC ϵ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5134). This experiment was conducted under reducing conditions and using the 12-230kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

PKCε (protein kinase C-epsilon) is an 87 kDa member of the novel PKC subfamily, AGC Ser/Thr protein kinase family of enzymes. It is a widely-expressed Ca⁺⁺-insensitive, phospholipid-dependent enzyme that catalyzes the phosphorylation of multiple proteins. Human PKCε is 737 amino acids (aa) in length. It contains two general regions: a non-Ca⁺⁺-binding plus lipid binding regulatory region (aa's 1-99 and 169-292, respectively), and an ATP-binding catalytic domain (aa 408-668). Phosphorylation of PKCε on Thr566, Ser368 and Ser729 activates its enzymatic activity and increases its molecular weight to 92 kDa. One potential splice form shows a 114 aa substitution for aa 118-737. Over aa 580-737, human PKCε is 98% and 99% aa identical to mouse and canine PKCε, respectively.