

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human DGK-ε in direct ELISAs and human, mouse and rat DGK-ε in Western blots. In Western blots, approximately 10-50% cross-reactivity with recombinant human DGK zeta, eta, iota, alpha, theta, gamma, kappa, delta, and beta is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 670914
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human DGK-ε Asn314-Arg435 Accession # P52429
Formulation	Lyophilized from a 0.2 μm 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 μm filtered solution in PBS.

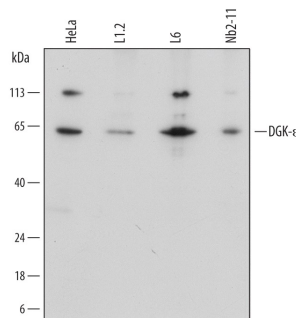
APPLICATIONS

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 μg/mL	See Below
Immunohistochemistry	8-25 μg/mL	See Below

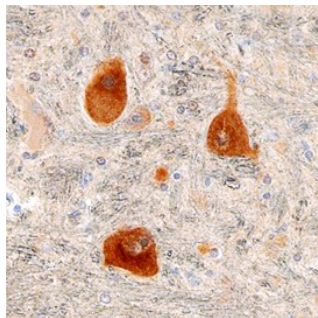
DATA

Western Blot



Detection of Human, Mouse, and Rat DGK-ε by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, L1.2 mouse pro-B cell line, L6 rat myoblast cell line, and Nb2-11 rat lymphoma cell line. PVDF membrane was probed with 1 μg/mL of Mouse Anti-Human DGK-ε Monoclonal Antibody (Catalog # MAB5125) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for DGK-ε at approximately 64 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



DGK-ε in Human Brain. DGK-ε was detected in immersion fixed paraffin-embedded sections of human brain (medulla) using Mouse Anti-Human DGK-ε Monoclonal Antibody (Catalog # MAB5125) at 15 μg/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 # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to neurons. This application has not yet been tested in mouse or rat samples. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

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

DGK-ε (Diacylglycerol kinase epsilon) is a 65 kDa member of the eukaryotic diacylglycerol kinase family of enzymes. It is a type III DGK that possesses only a C1/Cys-rich domain and a catalytic region, and is found in neurons and testis. DGK-ε specifically phosphorylates arachidonate-containing DAG, and may downregulate DAG signaling that results from inositol cycling. Human DGK-ε is 567 amino acids (aa) in length. It contains one predicted transmembrane domain (aa 22-42), two C1 DAG-binding regions (aa 59-108 and 124-177) and one catalytic domain (aa 219-350). DGK-ε is predicted to form intramembrane oligomers. Over aa 314-435, human DGK-ε shares 99% aa identity with mouse DGK-ε.