

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects endogenous human, mouse, and rat GRK2.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human GRK2 Pro468-Leu689 Accession # P25098
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.

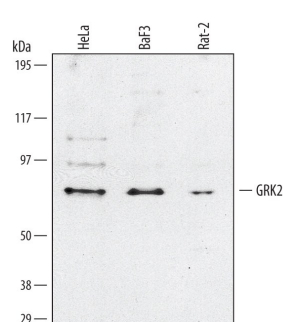
APPLICATIONS

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	5-15 µg/mL	See Below
Knockout Validated	GRK2 is specifically detected in HEK293T human embryonic kidney parental cell line but is not detectable in GRK2 knockout HEK293T cell line.	

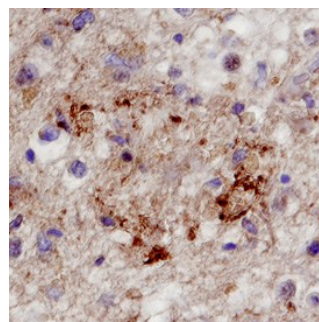
DATA

Western Blot



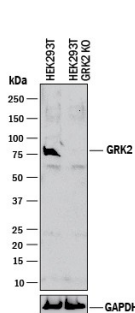
Detection of Human/Mouse/Rat GRK2 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, BaF3 mouse pro-B cell line, and Rat-2 rat embryonic fibroblast cell line. PVDF membrane was probed with 1 µg/mL of Human/Mouse/Rat GRK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4339) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for GRK2 at approximately 79 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

Immunohistochemistry



GRK2 in Human Alzheimer's Disease Brain. GRK2 was detected in immersion fixed paraffin-embedded sections of human Alzheimer's disease brain using Human/Mouse/Rat GRK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4339) at 10 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-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of neurons. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Knockout Validated



Western Blot Shows Human GRK2 Specificity by Using Knockout Cell Line. Western blot shows lysates of HEK293T human embryonic kidney parental cell line and GRK2 knockout HEK293T cell line (KO). PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human/Mouse/Rat GRK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4339) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for GRK2 at approximately 76 kDa (as indicated) in the parental HEK293T cell line, but is not detectable in knockout HEK293T cell line. GAPDH (Catalog # AF5718) is shown as a loading control. This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

PREPARATION AND STORAGE

Reconstitution Reconstitute at 0.2 mg/mL in sterile PBS.

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.

- 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

G protein-coupled receptor kinases (GRKs) are important modulators of G protein-coupled receptor (GPCR) signaling. Receptor phosphorylation by specific GRKs plays a key role in triggering rapid desensitization. The GRK family consists of 7 isoforms that share a central catalytic domain with homology to other serine/threonine kinases. The catalytic domain is flanked by an amino-terminal RGS domain of 183-188 amino acids and a carboxyl-terminus of variable length. GRK2 is a member of the β ARK subfamily, and was originally termed β -adrenergic receptor kinase 1 (β ARK1).