

DESCRIPTION

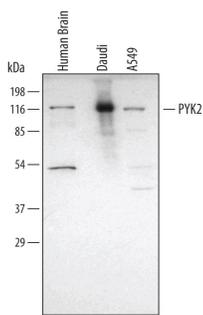
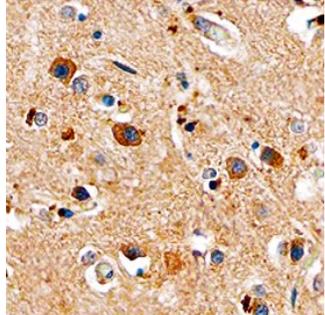
Species Reactivity	Human
Specificity	Detects endogenous human PYK2 in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human PYK2 Asn221-Arg411 Accession # Q14289
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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

DATA

<p>Western Blot</p> 	<p>Detection of Human PYK2/FAK2 by Western Blot. Western blot shows lysates of human brain tissue, Daudi human Burkitt lymphoma, and A549 human lung carcinoma cells. PVDF membrane was probed with 1 µg/mL of Human PYK2/FAK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4589) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for PYK2/FAK2 at approximately 116 kDa (as indicated). This experiment was conducted under reducing conditions and using <i>Immunoblot Buffer Group 1</i>.</p>	<p>Immunohistochemistry</p>  <p>PYK2/FAK2 in Human Brain. PYK2/FAK2 was detected in immersion fixed paraffin-embedded sections of human brain using Sheep Anti-Human PYK2/FAK2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4589) 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 staining was localized to neuronal cell bodies. View our protocol for <i>Chromogenic IHC Staining of Paraffin-embedded Tissue Sections</i>.</p>
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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	<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

PYK2 (Proline-rich tyrosine kinase 2; also FAK2, RAFTK and CAKβ) is a 112-116 kDa member of the FAK subfamily, tyrosine protein kinase family. It is expressed in multiple cell types, including endothelial cells, vascular smooth muscle cells, megakaryocytes and neurons. PYK2 is activated by elevated intracellular Ca⁺⁺ and is associated with MAPK pathway activation. Human PYK2 is 1009 amino acids (aa) in length. It contains one FERM domain that binds to growth factor receptors (aa 39-359), a protein kinase domain (aa 425-683), two Pro-rich segments that bind SH domains (aa 702-767 and 831-869), and one FAT region that interacts with integrins (aa 868-1009). Phosphorylation of PYK2 at Tyr402/579/580 is associated with changes in activity. There is one splice variant that shows a deletion of aa 739-780.