

DESCRIPTION

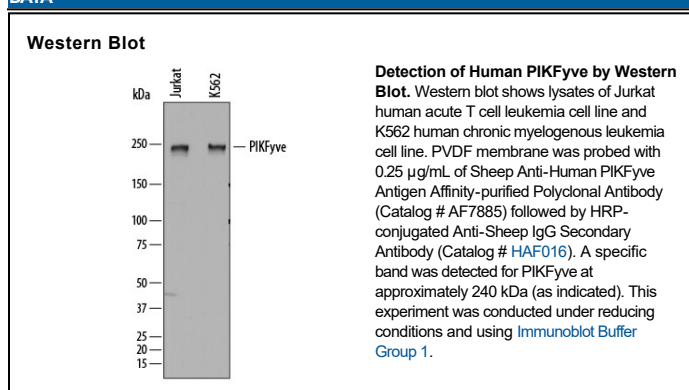
Species Reactivity	Human
Specificity	Detects human PIKfyve in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human PIKfyve Lys215-Lys361 Accession # Q9Y2I7
Formulation	Lyophilized from a 0.2 µm filtered 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	0.25 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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

PIKfyve (Phosphoinositide Kinase for five position containing a fyve finger (FAB1/YOTB/Vac1/EEA1) domain; also phosphatidylinositol 3-phosphate 5-kinase type III and Type III PIP kinase) is a 230-260 kDa cytoplasmic and endocytic member of an ancient family of phosphatidylinositol-3,5 biphosphate (PI[3,5]P₂ synthesizing enzymes. It is associated with endosomes, particularly the microdomains of early endosomes that are EEA1-deficient. PIKfyve binds to membrane-embedded phosphatidylinositol and initially converts PI3P into PI(3,5)P₂, which is then converted into PI5P. In conjunction with ArPIKfyve and Sac3, its actions are involved in the normal transport, fusion, and membrane export of endosomes. Notably, PIKfyve also appears to act as a protein kinase, apparently controlling its own activity through autophosphorylation. Human PIKfyve is 2098 amino acids (aa) in length. It contains one FYVE PI3P-binding zinc-finger domain (aa 154-219), a DEP domain (aa 365-440) and a C-terminal PIP kinase region (aa 1172-2085). There are no less than 29 utilized Ser/Thr phosphorylation sites, plus two utilized Tyr phosphorylation sites. Three potential isoform variants are reported, all which possess a three aa substitution for aa 546-2098. Two of these three also demonstrate a deletion of aa 108-204, and a nine aa substitution for aa 109-203, respectively. Over aa 215-361, human and mouse share 95% aa sequence identity.