

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
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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