

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat Inorganic Pyrophosphatase/PPA1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Inorganic Pyrophosphatase/PPA1 Met1-Asn289 Accession # Q15181
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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

PPA1 (Inorganic pyrophosphatase 1; also PPase and IOPPP) is a 32-36 kDa cytoplasmic member of the PPase family of enzymes. It is ubiquitously expressed, and acts on di- (or pyro) phosphate, generating orthophosphate in a Mg⁺-dependent manner. This activity can both generate energy for cells, or in the case of osteoblasts, provide raw material for calcification. The consumption of pyrophosphate may also remove inhibitors of enzymes such as guanylyl cyclase, and PPA1 itself is also reported to stimulate gene expression. Human PPA1 is 289 amino acids (aa) in length. There is one pyrophosphatase domain between aa 42-255, and two utilized acetylation sites at Lys 57 and Lys228. PPA1 is known to form homodimers. There is one potential alternative start site at Met46. Full-length human PPA1 shares 94% aa sequence identity with mouse PPA1.

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