

**DESCRIPTION**

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human Inorganic Pyrophosphatase/PPA1 in direct ELISAs and human, mouse, and rat Inorganic Pyrophosphatase/PPA1 in Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 840941
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Inorganic Pyrophosphatase/PPA1 Met1-Asn289 Accession # Q15181
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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<sup>+</sup>-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.

**PRODUCT SPECIFIC NOTICES**

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