

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human PTP1B in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 208607
Purification	Protein A or G purified
Immunogen	<i>E. coli</i> -derived recombinant human PTP1B Glu2-Thr435 Accession # P18031
Conjugate	Alexa Fluor Plus 594 Excitation Wavelength: 590 nm Emission Wavelength: 618 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.

Immunohistochemistry Optimal dilution of this antibody should be experimentally determined.

DATA

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

Protein tyrosine phosphatase 1B (PTP1B) is an enzyme that removes phosphate groups covalently attached to tyrosine residues in proteins. This ubiquitously expressed enzyme is anchored in the endoplasmic reticulum by its C-terminal end and has its catalytic regions exposed to the cytosol. The recombinant protein lacks the C-terminal 114 amino acids but is fully active. PTP1B will dephosphorylate a wide variety of phosphoproteins, such as receptors for the growth factors insulin and epidermal growth factor (EGF), c-Src and β -catenin. Of particular interest is the observation that PTP1B knock-out mice are resistant to high-caloric intake-induced obesity and have exaggerated insulin responses, suggesting that PTP1B may play an important role in regulating growth factor responsiveness.

References:

1. Angers-Loustau, *et al.* (1999) *Biochem. Cell Biol.* **77**:493.
2. Sarmiento, *et al.* (1998) *J. Biol. Chem.* **273**:26368.
3. Bjorge, *et al.* (2000) *J. Biol. Chem.* **52**:41439.
4. Balsamo, *et al.* (1996) *J. Cell Biol.* **134**:801.
5. Elchebly, *et al.* (1999) *Science* **283**:1544.

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