Human/Mouse/Rat TC-PTP Alexa Fluor® 532-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 252294

Catalog Number: FAB1930X

100 µg

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat TC-PTP in Western blots. In Western blots, no cross-reactivity with PTP1B is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 252294
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human TC-PTP Pro2-Asn314 Accession # P17706
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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

T-cell protein tyrosine phosphatase (TC-PTP), also known as PTPT and PTPN2, is an enzyme that removes phosphate groups covalently attached to tyrosine residues in proteins. This enzyme has two C-terminal end splice variants with distinctly different subcellular localizations. The shorter 45 kilodalton isoform is exclusively nuclear in resting cells, but redistrubutes to the cytosol upon stimulation with growth factors (1) and cellular stress (2). The longer 48 kilodalton isoform is exclusively found in the endoplasmic reticulum (3) and seems to have distinctly different physiologic substrates from the smaller isoform (1, 4). Although found in many cell types and tissues, TC-PTP is particularly prominent in hemopoietic cell types (5, 6). Knockout mice lacking TC-PTP are born viable but die 3 to 5 weeks after birth of erythropoietic and lymphopoietic deficits (7), indicating a critical role for TC-PTP in bone marrow maturation. TC-PTP will dephosphorylate a wide range of phosphoproteins, such as $p52^{Shc}$ (6) and receptors for EGF (1), Insulin (8) and growth hormone (6). The recombinant protein lacks the C-terminal 100 amino acids that determine intracellular localization but is fully active (9).

PRODUCT SPECIFIC NOTICES

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