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Datasheet for 500-301-262

Phosphotyrosine Antibody

Overview

Description:	Anti-PhosphoTyrosine (Ascites) (MOUSE) Monoclonal Antibody - 500-301-262
Item No.:	500-301-262
Size:	100 µL
Applications:	ELISA, WB
Reactivity:	Phosphotyrosine
Host Species:	Mouse

Product Details

Background:	Tyrosine (Tyr or Y) or 4-hydroxyphenylalanine is a hydrophilic amino acid. In plants and most microorganisms, tyrosine and α-ketoglutarate are produced via prephenate, when oxidatively decarboxylated with retention of the hydroxyl group to give p-hydroxyphenylpyruvate, which is transaminated using glutamate as the nitrogen source. Mammals synthesize tyrosine from the essential amino acid phenylalanine (phe), which is derived from food. The conversion of phe to tyr is catalyzed by the enzyme phenylalanine hydroxylase causing the addition of a hydroxyl group. In its phosphorylated form, tyrosine is called phosphotyrosine. Tyrosine phosphorylation is one of the key steps in signal transduction and regulation of enzymatic activity. Protein kinases can tag on the hydroxyl group end with a phosphate group to some tyrosine residues causing a phosphorylated form. Tyrosine residues may also be modified by the addition of a sulfate group, a process known as tyrosine sulfation.
Synonyms:	mouse anti-Phosphotyrosine Antibody, mouse anti-pY antibody, PhosphoTyrosine reactive antibody, monoclonal phosphotyrosine, anti-phosphotyrosine produced in mouse
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	13F9
Format:	ASCITES

Target Details

Reactivity:	Phosphotyrosine

Immunogen Type:	Other
Immunogen:	This monoclonal antibody was produced after repeated immunizations of balb/c mice with phosphotyrosine conjugated KLH.
Purity/Specificity:	This product is clarified ascites produced in balb/c mice using clone 13F9. Reactivity is specific for phosphotyrosine and minimal cross reactivity is observed against phosphoserine or phosphothreonine.

Application Details

Tested Applications:	ELISA, WB
Application Note:	This monoclonal antibody has been tested in ELISA and Western Blot and reacts specifically with phosphotyrosine and shows minimal reactivity by ELISA and competitive ELISA with phosphoserine or phosphothreonine. The antibody reacts with free phosphotyrosine, phosphotyrosine conjugated to carriers such as thyroglobulin or BSA, and detects the presence of phosphotyrosine in proteins of both unstimulated and stimulated cell lysates. Although not tested, this antibody is likely functional in RIA, flow cytometry, immunohistochemistry and immunoprecipitation. Phosphorylation of tyrosine residues is associated with many growth factors and oncogene protein kinases, and is important for cell signaling in activation, proliferation and differentiation.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:4,000 - 1:20,000
WB:	1:500 - 1:2,000

Formulation

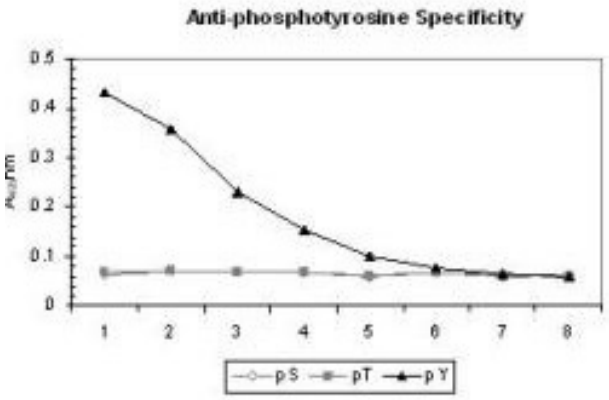
Physical State:	Liquid (sterile filtered)
Buffer:	None
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

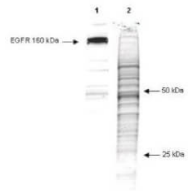
Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



ELISA
ELISA of Mouse anti-phosphotyrosine antibody. Antigen: BSA conjugates of pT, pY and pS. Coating amount: 0.1 µg per well. Primary antibody: Phosphotyrosine antibody at 1:1000. Dilution series (X-axis): 2-fold. Secondary antibody: HRP conjugated Gt-a-Mouse IgG H&L secondary antibody at 1:20,000. Substrate: TMB (p/n TMBE-0100).



Western Blot
Western Blot of Mouse anti-phosphotyrosine antibody (clone 13F9). Lane 1: phosphorylated EGFR in an A431 cell lysate. Lane 2: total protein in the unstimulated A431 cells lysate after Coomassie staining. Load: 10 µg per lane. Primary antibody: phosphotyrosine antibody at 1:1000 for 1 hr at RT. Secondary antibody: IRDye™800 Conjugated Goat-a-Mouse IgG [H&L] (610-132-120) diluted 1:2,500 for 30' at room temperature. Block: 5% BLOTTO overnight at 4°C. Other band(s): phosphotyrosine splice variants and isoforms.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.