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Datasheet for 200-401-MX4

T4 RNA Ligase Antibody

Overview

Description:	Anti-T4 RNA Ligase (RABBIT) Antibody - 200-401-MX4
Item No.:	200-401-MX4
Size:	50 µg
Applications:	ELISA, WB
Reactivity:	Virus
Host Species:	Rabbit

Product Details

Background:	The T4 RNA Ligase enzyme catalyzes the ligation of RNA strands with 3'-hydroxyl and 5'-phosphate termini, forming a phosphodiester and sealing certain types of single-strand breaks in RNA. This catalysis occurs by a three-step mechanism, starting with the activation of the enzyme by ATP, forming a phosphoramide bond between adenylate and a lysine residue. The adenylate group is then transferred to the 5'-phosphate terminus of the substrate, forming the capped structure 5'-(5'-diphosphoadenosine)-[RNA]. Finally, the enzyme catalyzes a nucleophilic attack of the 3'-OH terminus on the capped terminus, which results in the formation of the phosphodiester bond and release of the adenylate.
Synonyms:	Enterobacteria phage T4, RNA ligase 1, polyribonucleotide synthase (ATP), ribonucleic ligase
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	rnlA
Reactivity:	Virus
Immunogen Type:	Recombinant Protein
Immunogen:	Anti-T4 RNA Ligase antibody was produced from whole rabbit serum produced by repeated immunizations with T4 Ligase isolated from E. coli.

Purity/Specificity:	Protein A purified T4 RNA Ligase antibody is directed against T4 RNA Ligase (E. coli). The product was purified from monospecific antiserum by protein A chromatography.
Relevant Links:	• UniProtKB - A0A7S9SW04 • NCBI - NP_049839.1 • GeneID -1258717

Application Details

Tested Applications:	ELISA, WB
Application Note:	This protein A purified Anti-T4 RNA Ligase antibody has been tested for use in ELISA amd Western Blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 43.5 kDa in size corresponding to RNA Ligase by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:13,000-1:14,000
WB:	1:20,000

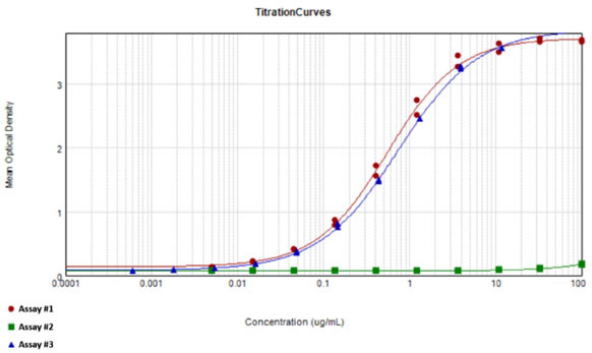
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.16 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

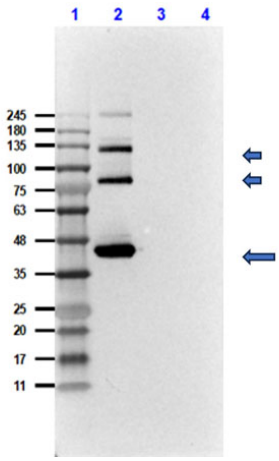
Shipping & Handling

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 results of Rabbit Anti-T4 RNA Ligase Antibody. Each well was coated in duplicate with 10 µg of T4 RNA Ligase (Red and Blue), BSA (Green). The starting dilution of antibody was 1:100 and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using Rabbit Anti-T4 RNA Ligase (p/n 200-401-MX4) [Blue] and T4 RNA Ligase bleed [Red and Green], Goat anti-Rabbit HRP (p/n 611-1302) 1:10,000, 1% Fish gel (p/n MB-066-0100), and TMB substrate (p/n TMBE-1000).



Western Blot
Western Blot Results of Rabbit Anti-T4 RNA Ligase Antibody.
Lane 1: Opal Prestained Molecular Weight Marker (p/n MB210-0500) [10µL].
Lane 2: T4 RNA Ligase [0.5µg].
Lane 3: T7 RNA Polymerase [0.5µg].
Lane 4: Bovine Albumin (BSA) (p/n 001-0133) [0.5µg].
Primary Antibody: Rabbit Anti-Anti-T4 RNA Ligase Antibody at 1:20,000 overnight at 2-8°C.
Secondary Antibody: Goat Anti-Rabbit IgG Peroxidase Conjugated (p/n 611-1302) at 1:40,000 at RT for 30 mins.
Block: BlockOut® Universal Blocking Buffer (p/n MB-073) at RT for 1hr.
Block: BlockOut® Universal Blocking Buffer (p/n MB-073) at RT for 1hr.
Expected MW: ~43.5kDa for T4 RNA Ligase. Observed MW: monomer ~43.5kDa, dimer ~87kDa, and trimer ~130kDa in lane 2.

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.