

# Product Datasheet

## RNase L Antibody (2E9) - BSA Free NB100-351SS

Unit Size: 0.025 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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**NB100-351SS**

RNase L Antibody (2E9) - BSA Free

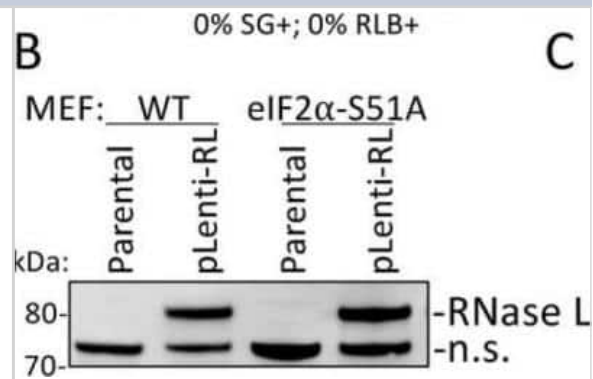
Product Information	
Unit Size	0.025 ml
Concentration	1.0 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2E9
Preservative	0.1% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	83 kDa

Product Description	
Description	Novus Biologicals Knockout (KO) Validated Mouse RNase L Antibody (2E9) - BSA Free (NB100-351) is a monoclonal antibody validated for use in IHC, WB and ELISA. Anti-RNase L Antibody: Cited in 14 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	6041
Gene Symbol	RNASEL
Species	Human, Hamster, Primate, Mouse (Negative), Rat (Negative)
Reactivity Notes	This antibody does not react with mouse or rat.
Immunogen	Purified full-length recombinant human RNaseL produced in insect cells. [UniProt# Q05823]

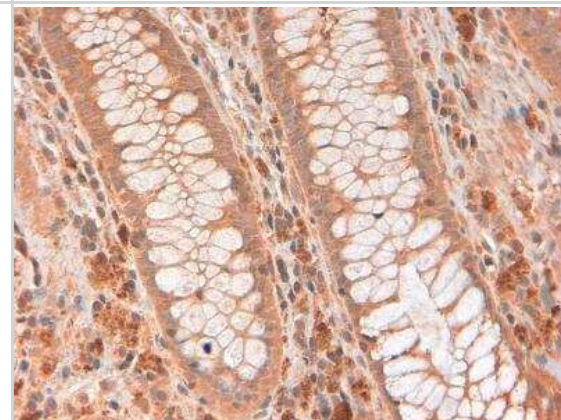
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, ELISA, Immunohistochemistry, Knockout Validated
Recommended Dilutions	Western Blot 1:1000-1:4000 (ECL), ELISA 1:100-1:2000, Immunohistochemistry 1:200-1:1000, Immunohistochemistry-Paraffin 1:200-1:1000, Knockout Validated
Application Notes	This RNase L (2E9) antibody is useful for ELISA, Western Blot and Immunohistochemistry on paraffin-embedded sections. By WB, this antibody recognizes a band at ~83 kDa, representing RNase L. A low-molecular mass, 37 kDa, isoform of RNase L has been described in peripheral blood mononuclear cell extracts. In IHC-P, staining was observed in the cytoplasm of human colon cells. Prior to immunostaining paraffin tissues, antigen retrieval with Tris-EDTA buffer (pH 6.0) is recommended. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

## Images

Western Blot: RNase L Antibody (2E9) - BSA Free [NB100-351] - Analysis for RNase L in WT and eIF2 $\alpha$ -S51A MEF cell lines transduced with RNase L-encoding lentivirus. n.s. indicates nonspecific band for the purpose of showing equal loading. Image collected and cropped by CiteAb from the following publication ([//pubmed.ncbi.nlm.nih.gov/31896577/](https://pubmed.ncbi.nlm.nih.gov/31896577/)) licensed under a CC-BY license.



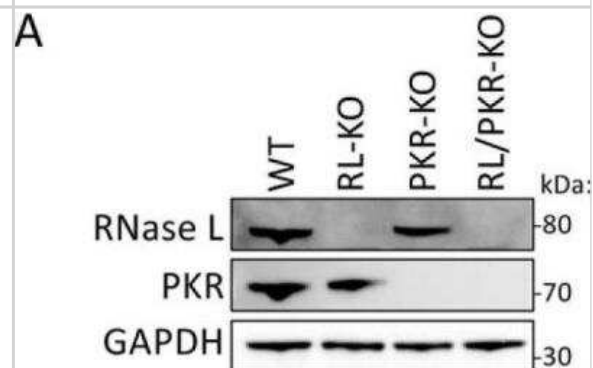
Immunohistochemistry: RNase L Antibody (2E9) [NB100-351] - RNase L antibody was tested in human colon using DAB with hematoxylin counterstain.



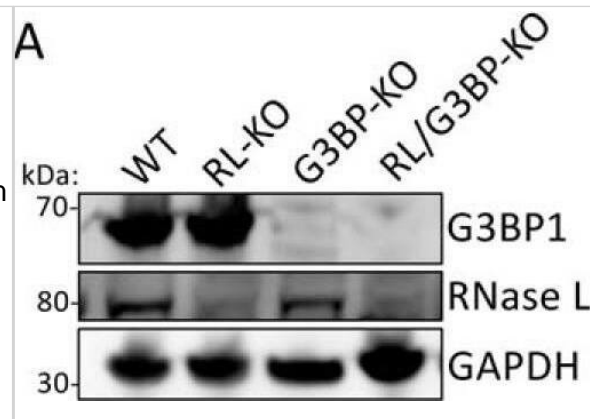
Western Blot: RNase L Antibody (2E9) [NB100-351] - RNase L in insect cell extracts transfected with recombinant human RNase L (0.1 ug) and Hey1B (100 ug)



Western Blot: RNase L Antibody (2E9) - BSA Free [NB100-351] - Analysis of PKR and RNase L in parental (WT), RNase L-KO (RL-KO), PKR-KO, and RNase L/PKR double knockout (RL/PKR-KO) A549 cells. Image collected and cropped by CiteAb from the following publication ([//pubmed.ncbi.nlm.nih.gov/31896577/](https://pubmed.ncbi.nlm.nih.gov/31896577/)) licensed under a CC-BY license.



Western Blot: RNase L Antibody (2E9) - BSA Free [NB100-351] - dsRNA-induced SGs require G3BP1 & G3BP2, whereas RLBs do not. A, immunoblot for G3BP1, RNase L, GAPDH in parental (WT), RL-KO, G3BP-KO, & RL/G3BP-KO U-2 OS cells. B, immunoblot for G3BP1 & G3BP2 in RL-KO & RL/G3BP-KO U-2 OS cells. C, IF for G3BP1 & PABPC1 4 h post-poly(I:C) transfection or treatment with 500  $\mu$ m sodium arsenite (SA) in the indicated cell lines. D, similar to C but enlarged to show RLB formation in U-2 OS-G3BP1/2-KO cells. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31896577>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Burke JM, Ripin N, Ferretti MB et al. RNase L activation in the cytoplasm induces aberrant processing of mRNAs in the nucleus PLoS pathogens 2022-11-01 [PMID: 36318584] (WB, Human)

Details:

Dilution used in WB 1:1500

Decker CJ, Burke JM, Mulvaney PK, Parker R RNA is required for the integrity of multiple nuclear and cytoplasmic membrane-less RNP granules The EMBO journal 2022-05-02 [PMID: 35355287] (WB)

Jung S, von Thülen T, Yang I et al. A ribosomal RNA fragment with 2',3'-cyclic phosphate and GTP-binding activity acts as RIG-I ligand Nucleic Acids Res. 2020-09-18 [PMID: 32946572] (WB, Human)

Corbet GA, Burke JM, Bublitz GR, Parker R dsRNA-induced condensation of antiviral proteins promotes PKR activation J Biol Chem 2020-01-04 [PMID: 31896577] (WB, Human)

Burke JM, Moon SL, Matheny T, Parker R RNase L Reprograms Translation by Widespread mRNA Turnover Escaped by Antiviral mRNAs Mol. Cell [PMID: 31494035]

Fabre O, Salehzada T, Lambert K et al. RNase L controls terminal adipocyte differentiation, lipids storage and insulin sensitivity via CHOP10 mRNA regulation. Cell Death Differ 2012-01-01 [PMID: 22441668]

Al-Haj L, Blackshear PJ, Khabar KS. Regulation of p21/CIP1/WAF-1 mediated cell-cycle arrest by RNase L and tristetraprolin, and involvement of AU-rich elements Nucleic Acids Res 2012-06-19 [PMID: 22718976] (WB, Human)

Al-Ahmadi, W et al. Alternative polyadenylation variants of the RNA binding protein, HuR: abundance, role of AU-rich elements and auto-Regulation. Nucleic Acids Res;37(11):3612-24. 2009-06-01 [PMID: 19359363]

Han, JQ et al. A phylogenetically conserved RNA structure in the poliovirus open reading frame inhibits the antiviral endoribonuclease RNase L. J Virol;81(11):5561-72. 2007-06-01 [PMID: 17344297]

Carpten, J et al. Germline mutations in the ribonuclease L gene in families showing linkage with HPC1. Nat Genet;30(2):181-4. 2002-02-01 [PMID: 11799394]

Wang, L et al. Elevated levels of 2',5'-linked oligoadenylate-dependent ribonuclease L occur as an early event in colorectal tumorigenesis. Clin Cancer Res;1(11):1421-8. 1995-11-01 [PMID: 9815940]

Lin RJ, Yu HP, Chang BL et al. Distinct antiviral roles for human 2',5'-oligoadenylate synthetase family members against dengue virus infection. J Immunol;183(12):8035-43. 2009-12-15 [PMID: 19923450]

More publications at <http://www.novusbio.com/NB100-351>

## Procedures

### Serum protocol for RNase L Antibody (NB100-351)

RNase L Antibody (2E9):

Western Blot

1. Proteins are separated on a 10% SDS-PAGE gel.
2. Proteins are transferred to Immobilon-P membranes (Millipore Co.).
3. Following the protein transfer, the membrane is blocked with PBS-T [PBS + 0.07% Tween-20]+ 5% NFDM.
4. Anti-RNase L [cat# NB 100-351] is diluted 1:1,000, in blocking buffer and incubated for 2 hour at room temperature, gently shaking.
5. The membrane is then washed, 3 times with PBS-T, 5 minutes each.
6. Secondary antibody is incubated for 1 hour at room temperature, gently shaking.
7. The membrane is then washed, 4 times with PBS-T, 5 minutes each.
8. Membrane is developed using ECL reagents.

NOTE: Cell extracts of insect cells expressing human RNase L (0.1 ug) and Hey 1B (100 ug) were used as positive controls for this antibody.





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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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