

# RNase Z1 (N-15): sc-85118

## BACKGROUND

RNase Z1 (ribonuclease Z 1), also known as ELAC1 or D29, is a 363 amino acid nuclear protein that belongs to the RNase Z family of RNA-processing enzymes. Expressed throughout the body, with highest expression in lung, brain, placenta, heart, liver, kidney and pancreas, RNase Z1 is a zinc phosphodiesterase that plays a role in tRNA maturation by removing 3'-trailer segments from precursor tRNA. In addition, RNase Z has a variety of other zinc-dependent RNA processing activities, including generation of 3' termini on tRNA, endonucleolytic cleavage of RNA and removal of extra 3' nucleotides from unprocessed tRNA. Defects in the gene encoding RNase Z1 may be involved in the pathogenesis of prostate cancer, suggesting a possible role for RNase Z1 in carcinogenesis.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: ELAC1 (human) mapping to 18q21.2; Elac1 (mouse) mapping to 18 E2.

## SOURCE

RNase Z1 (N-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of RNase Z1 of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85118 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

RNase Z1 (N-15) is recommended for detection of RNase Z1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other RNase family members.

RNase Z1 (N-15) is also recommended for detection of RNase Z1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RNase Z1 siRNA (h): sc-76411, RNase Z1 siRNA (m): sc-144626, RNase Z1 shRNA Plasmid (h): sc-76411-SH, RNase Z1 shRNA Plasmid (m): sc-144626-SH, RNase Z1 shRNA (h) Lentiviral Particles: sc-76411-V and RNase Z1 shRNA (m) Lentiviral Particles: sc-144626-V.

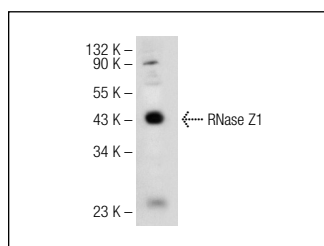
Molecular Weight of RNase Z1: 40 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



RNase Z1 (N-15): sc-85118. Western blot analysis of RNase Z1 expression in PC-12 whole cell lysate.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.