

**RNASET2 Antibody**  
Catalog # ASC11454**Specification****RNASET2 Antibody - Product Information**

Application	WB, ICC, IF
Primary Accession	<a href="#">O00584</a>
Other Accession	<a href="#">NP_003721</a> , <a href="#">5231228</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	RNASET2 antibody can be used for detection of FOXRED2 by Western blot at 1 µg/mL.

**RNASET2 Antibody - Additional Information**

Gene ID	8635
Target/Specificity	RNASET2;

**Reconstitution & Storage**

RNASET2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

RNASET2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**RNASET2 Antibody - Protein Information**

**Name** RNASET2

**Synonyms** RNASE6PL

**Function**

Ribonuclease that plays an essential role in innate immune response by recognizing and degrading RNAs from microbial pathogens that are subsequently sensed by TLR8 (PubMed:[31778653](http://www.uniprot.org/citations/31778653)). Cleaves preferentially single-stranded RNA molecules between purine and uridine residues, which critically contributes to the supply of catabolic uridine and the generation of purine-2',3'-cyclophosphate-terminated oligoribonucleotides (PubMed:[31778653](http://www.uniprot.org/citations/31778653), PubMed:[38697119](http://www.uniprot.org/citations/38697119)). In turn, RNase T2 degradation products promote the RNA-dependent activation of TLR8 (PubMed:[31778653](http://www.uniprot.org/citations/31778653)). In plasmacytoid dendritic cells, it cooperates with PLD3 or PLD4 5'→3' exonucleases to process RNA

fragments and release 2',3'-cyclic guanosine monophosphate (2',3'-cGMP), a potent stimulatory ligand for TLR7 (PubMed:<a href="http://www.uniprot.org/citations/38697119" target="\_blank">38697119</a>). Also plays a key role in degradation of mitochondrial RNA and processing of non-coding RNA imported from the cytosol into mitochondria (PubMed:<a href="http://www.uniprot.org/citations/28730546" target="\_blank">28730546</a>, PubMed:<a href="http://www.uniprot.org/citations/30184494" target="\_blank">30184494</a>). Participates as well in degradation of mitochondrion-associated cytosolic rRNAs (PubMed:<a href="http://www.uniprot.org/citations/30385512" target="\_blank">30385512</a>).

#### Cellular Location

Secreted. Lysosome lumen. Endoplasmic reticulum lumen. Mitochondrion intermembrane space. Note=Full-length RNASET2 is found in the endoplasmic reticulum while smaller RNASET2 proteolytic products are found in the lysosome fraction.

#### Tissue Location

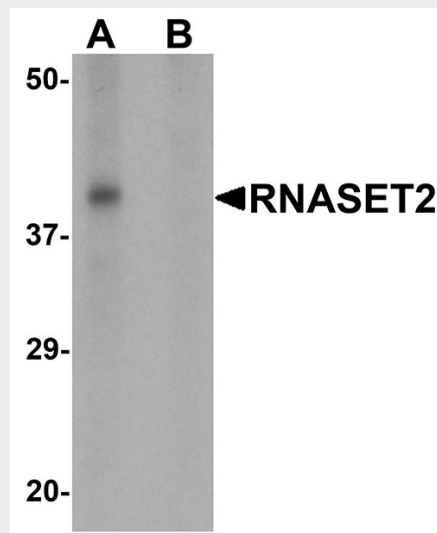
Ubiquitous. Higher expression levels observed in the temporal lobe and fetal brain.

### RNASET2 Antibody - Protocols

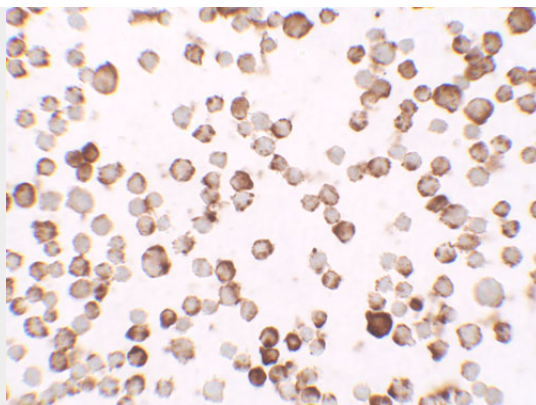
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

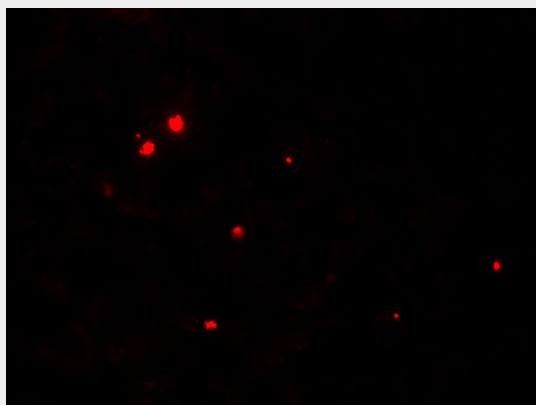
### RNASET2 Antibody - Images



Western blot analysis of RNASET2 in SW480 cell lysate with RNASET2 antibody at 1  $\mu$ g/mL in (A) the absence and (B) the presence of blocking peptide.



Immunocytochemistry of RNASET2 in SW480 cells with RNASET2 antibody at 2.5 µg/ml.



Immunofluorescence of RNASET2 in SW480 cells with RNASET2 antibody at 5 µg/ml.

### **RNASET2 Antibody - Background**

RNASET2 Antibody: RNASET2 is a novel member of the Rh/T2/S-glycoprotein class of extracellular ribonucleases. It is a single copy gene that maps to 6q27, a region associated with human malignancies and chromosomal rearrangement, and has been suggested to function as a tumor suppressor protein. Its expression is suppressed in Human T-cell Leukemia Virus type 1 (HTLV-1) infected cells following the binding of the HTLV-1 Tax protein to the RNASET2 promoter. As Adult T-cell leukemia (ATL) is one of the primary diseases caused by HTLV-1 infection, a reduction in the level of RNASET2 by Tax may play a role in ATL development.

### **RNASET2 Antibody - References**

Acquati F, Morelli C, Cinquetti R, et al. Cloning and characterization of a senescence inducing and class II tumor suppressor gene in ovarian carcinoma at chromosome region 6q27. *Oncogene* 2001; 20:980-8.

Campomenosi P, Salis S, Lingqvist C, et al. Characterization of RNASET2, the first human member of the Rh/T2/S family of glycoproteins. *Arch. Biochem. Biophys.* 2006; 449:17-26

Polakowski N, Han H, and Lemasson I. Direct inhibition of RNase T2 expression by the HTLV-1 viral protein Tax. *Viruses* 2011; 3:1485-500.