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# TYW2 Antibody
**Catalog # ASC11334**

## Specification

### TYW2 Antibody - Product Information

| | |
|---|---|
| Application | **WB, ICC** |
| Primary Accession | Q53H54 |
| Other Accession | Q53H54, 157388919 |
| Reactivity | **Human, Mouse** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **IgG** |
| Application Notes | **TYW2 antibody can be used for detection of TYW2 by Western blot at 0.5 µg/mL. Antibody can also be used for immunocytochemistry starting at 10 µg/mL.** |

### TYW2 Antibody - Additional Information

Gene ID **55039**

**Target/Specificity**
TRMT12; TYW2 antibody is predicted to not cross-react with other TYW protein family members. At least two isoforms of TYW2 are known to exist; this antibody will detect both isoforms

**Reconstitution & Storage**
TYW2 antibody can be stored at 4 ℃, stable for 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**
TYW2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### TYW2 Antibody - Protein Information

**Name** TRMT12

**Synonyms** TRM12, TYW2

**Function**
S-adenosyl-L-methionine-dependent transferase that acts as a component of the wybutosine biosynthesis pathway. Wybutosine is a hyper modified guanosine with a tricyclic base found at the 3'-position adjacent to the anticodon of eukaryotic phenylalanine tRNA. Catalyzes the transfer of the alpha-amino-alpha-carboxypropyl (acp) group from S- adenosyl-L-methionine to the C-7 position of 4-demethylwyosine (imG-14) to produce wybutosine-86.

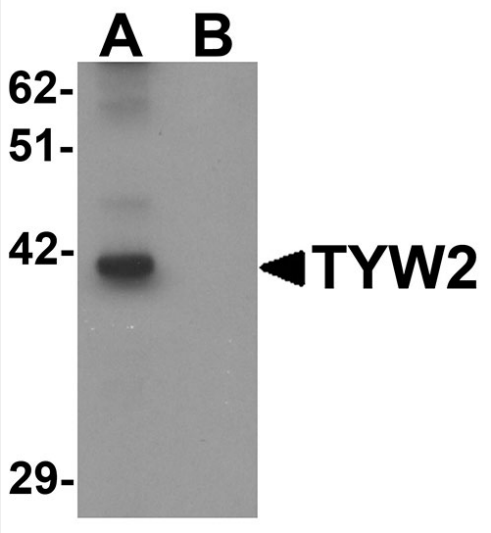
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## TYW2 Antibody - Protocols

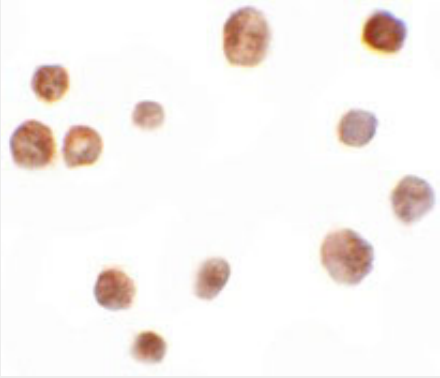
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## TYW2 Antibody - Images




Western blot analysis of TYW2 in K562 cell lysate with TYW2 antibody at 0.5 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunocytochemistry of TYW2 in K562 cells with TYW2 antibody at 10 µg/mL.

## TYW2 Antibody - Background

TYW2 Antibody: TYW2, also known as TRM12, is an enzyme that participates in the wybutosine-tRNA (Phe) biosynthesis pathway. Wybutosine (yW) is a hypermodified guanosine at the 3-prime position adjacent to the anticodon of phenylalanine tRNA that stabilizes codon-anticodon interactions during decoding on the ribosome. TYW2 is involved in a multistep enzymatic reaction that stabilizes codon-anticodon base-pairing during the ribosomal decoding process, thereby

ensuring correct translation. TYW2 was found to be amplified in 7 of 8 breast cancers cell lines analyzed, and qPCR analysis of 30 breast tumors showed overexpression of TYW2 mRNA of over 2-fold in 26, suggesting that TYW2 may play a role in breast cancer.

**TYW2 Antibody - References**

Noma A and Suzuki T. Ribonucleome analysis identified enzyme genes responsible for wybutosine synthesis. Nucleic Acids Symp. Ser. (Oxf) 2006; 65-6
Noma A, Kirino Y, Ikeuchi Y, et al. Biosynthesis of wybutosine, a hyper-modified nucleoside in eukaryotic phenylalanine tRNA. EMBO J. 2006; 25:2142-54
Rodriquez V, Chen Y, Elkahloun A, et al. Chromosome 8 BAC array comparative genomic hybridization and expression analysis identify amplification and overexpression of TRMT12 in breast cancer. Genes Chromosomes Cancer 2007; 46:694-707