10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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.

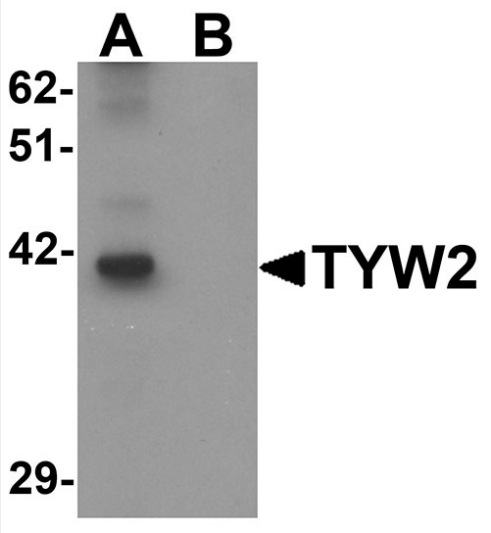
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TYW2 Antibody - Protocols

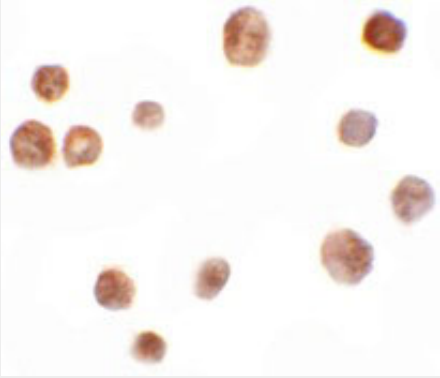
Provided below are standard protocols that you may find useful for product applications.

- 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