

TYW2 Antibody

Catalog # ASC11334

Product Information

Application	WB, ICC, E
Primary Accession	Q53H54
Other Accession	Q53H54 , 157388919
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50236
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TYW2 antibody can be used for detection of TYW2 by Western blot at 0.5 μ g/mL. Antibody can also be used for immunocytochemistry starting at 10 μ g/mL.

Additional Information

Gene ID	55039
Other Names	tRNA wybutosine-synthesizing protein 2 homolog, tRNA-yW-synthesizing protein 2, 2.5.1.114, tRNA(Phe) (4-demethylwyosine(37)-C(7)) aminocarboxypropyltransferase, TRMT12, TRM12, TYW2
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 °C, 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.

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.

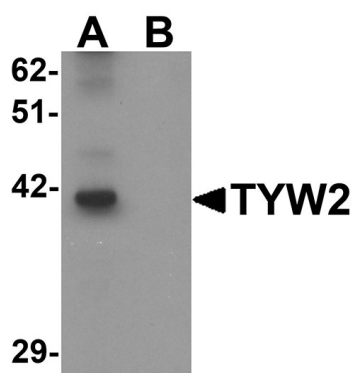
Background

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.

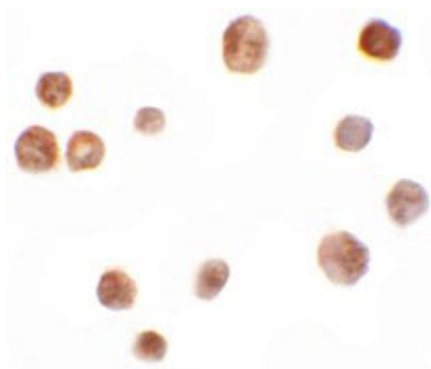
References

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
Rodriguez 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

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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.