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

TYW4 Antibody

Catalog # ASC11336

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O60294
Other Accession	NP_055608, 25188199
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	75602
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TYW4 antibody can be used for detection of TYW4 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	9836
Other Names	tRNA wybutosine-synthesizing protein 4, tRNA yW-synthesizing protein 4, 2.1.1.290, 2.3.1.231, Leucine carboxyl methyltransferase 2, tRNA(Phe) (7-(3-amino-3-(methoxycarbonyl)propyl)wyosine(37)-N)-methoxycarbonyltransferase, tRNA(Phe) (7-(3-amino-3-carboxypropyl)wyosine(37)-O)-methyltransferase, LCMT2, KIAA0547, TYW4
Target/Specificity	LCMT2; TYW4 antibody is predicted to not cross-react with other TYW protein family members. At least two isoforms of TYW4 are known to exist; this antibody will detect only the long isoform.
Reconstitution & Storage	TYW4 antibody can be stored at 4℃ for three months and -20℃, 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	TYW4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LCMT2
Synonyms	KIAA0547, TYW4
Function	Probable S-adenosyl-L-methionine-dependent methyltransferase 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 (By similarity). May methylate the carboxyl group of leucine residues to form alpha-leucine ester residues.

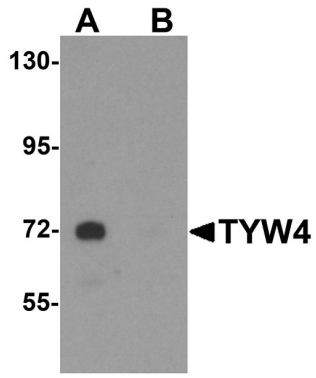
Background

TYW4 Antibody: TYW4 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. TYW4 is involved in a multistep enzymatic reaction that stabilizes codon-anticodon base-pairing during the ribosomal decoding process, thereby ensuring correct translation.

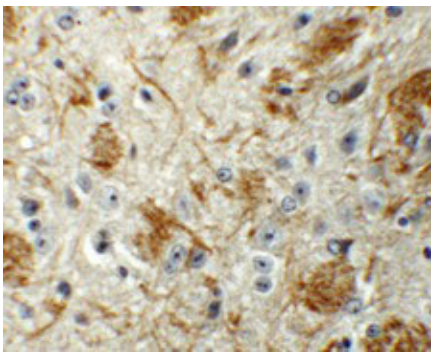
References

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.

Images

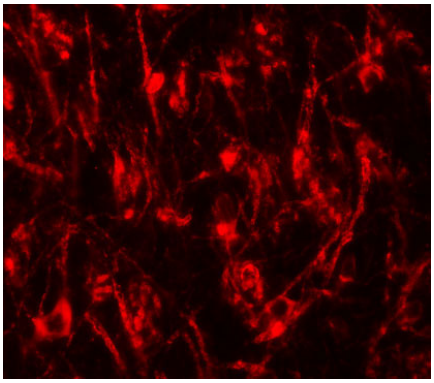


Western blot analysis of TYW4 in rat brain tissue lysate with TYW4 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of TYW4 in mouse brain tissue with TYW4 antibody at 5 µg/mL.

Immunofluorescence of TYW1 in mouse brain tissue with TYW1 antibody at 20 µg/mL.



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