



TYW1 (N-12): sc-104718

BACKGROUND

Wybutosine, a derivative of wyosine, is a tricyclic hypermodified guanosine found in eukaryotic and archaeal tRNAs. TYW1 (tRNA-yW synthesizing protein 1), also known as TYW1A, RSAFD1 or YPL207W, is a 732 amino acid protein containing one flavodoxin-like domain that participates in the wybutosine-tRNA(Phe) biosynthesis pathway. Involved in tRNA modification, TYW1 is the human homolog of a yeast gene essential for yW synthesis. TYW1 is involved in a multistep enzymatic reaction that stabilizes codon-anticodon base-pairing during the ribosomal decoding process, thereby ensuring correct translation. TYW1 binds to one 4Fe-4S cluster and exists as two alternatively spliced isoforms. The gene encoding TYW1 is located on human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to Osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

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CHROMOSOMAL LOCATION

Genetic locus: TYW1 (human) mapping to 7q11.21.

SOURCE

TYW1 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TYW1 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104718 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TYW1 (N-12) is recommended for detection of TYW1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family members TYW1B, TYW3 or TYW4.

Suitable for use as control antibody for TYW1 siRNA (h): sc-89803, TYW1 shRNA Plasmid (h): sc-89803-SH and TYW1 shRNA (h) Lentiviral Particles: sc-89803-V.

Molecular Weight of TYW1: 84 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.