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

KD-Validated Anti-MARS1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2205

Product Information

Application	WB, FC, ICC
Primary Accession	P56192
Reactivity	Rat, Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB185
Calculated MW	101116
Gene Name	MARS1
Aliases	MARS1; Methionyl-TRNA Synthetase 1; MetRS; Methionine--TRNA Ligase, Cytoplasmic; SPG70; CMT2U; MARS; Methionyl-TRNA Synthetase; EC 6.1.1.10; Methionine TRNA Ligase 1, Cytoplasmic; Cytosolic Methionyl-TRNA Synthetase; ILFS2; MTRNS; ILLD; TTD9; MRS
Immunogen	A synthesized peptide derived from human MARS

Additional Information

Gene ID	4141
Other Names	Methionine--tRNA ligase, cytoplasmic, 6.1.1.10, Methionyl-tRNA synthetase, MetRS, MARS1 (HGNC:6898), MARS

Protein Information

Name	MARS1 (HGNC:6898)
Synonyms	MARS
Function	Catalyzes the specific attachment of L-methionine to its cognate tRNA in a 2 step reaction: the amino acid (AA) is first activated by ATP to form AA-AMP and then transferred to the acceptor end of the tRNA (PubMed:11714285, PubMed:33909043). Plays a role in the synthesis of ribosomal RNA in the nucleolus (PubMed:10791971). In addition, can prevent the misincorporation of homocysteine into tRNA and protein by catalyzing a tRNA-independent hydrolysis of the misactivated homocysteinyl-AMP intermediate. The homocysteinyl-AMP intermediate undergoes an intramolecular cyclization reaction in which the thiolate side chain of homocysteine displaces the AMP group, forming homocysteine-thiolactone and AMP (By similarity).
Cellular Location	Cytoplasm, cytosol. Nucleus, nucleolus. Note=Localizes to the nucleolus in proliferative cells but disappears in quiescent cells

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