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MTR Rabbit pAb

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Catalog # AP56887

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q99707
Reactivity	Rat, Human
Predicted	Pig, Dog, Mouse, Rabbit, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	140527
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human MTR
Epitope Specificity	1001-1100/1625
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic
DISEASE	Homocystinuria-megaloblastic anemia, cblG complementation type (HMAG) [MIM:250940]: An autosomal recessive inborn error of metabolism resulting from defects in the cobalamin-dependent pathway that converts homocysteine to methionine. It causes delayed psychomotor development, megaloblastic anemia, homocystinuria, and hypomethioninemia.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes the 5-methyltetrahydrofolate-homocysteine methyltransferase. This enzyme, also known as cobalamin-dependent methionine synthase, catalyzes the final step in methionine biosynthesis. Mutations in MTR have been identified as the underlying cause of methylcobalamin deficiency complementation group G. Alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq, May 2014]

Additional Information

Gene ID	4548
Other Names	Methionine synthase, MS, 2.1.1.13, 5-methyltetrahydrofolate--homocysteine methyltransferase, Cobalamin-dependent methionine synthase, Vitamin-B12 dependent methionine synthase, MTR {ECO:0000303|PubMed:27771510, ECO:0000312|HGNC:HGNC:7468}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When

reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name MTR {ECO:0000303|PubMed:27771510, ECO:0000312|HGNC:HGNC:7468}

Function Catalyzes the transfer of a methyl group from methylcob(III)alamin (MeCbl) to homocysteine, yielding enzyme-bound cob(I)alamin and methionine in the cytosol (PubMed:16769880, PubMed:17288554, PubMed:27771510). MeCbl is an active form of cobalamin (vitamin B12) used as a cofactor for methionine biosynthesis. Cob(I)alamin form is regenerated to MeCbl by a transfer of a methyl group from 5-methyltetrahydrofolate (PubMed:16769880, PubMed:17288554, PubMed:27771510). The processing of cobalamin in the cytosol occurs in a multiprotein complex composed of at least MMACHC, MMADHC, MTRR (methionine synthase reductase) and MTR which may contribute to shuttle safely and efficiently cobalamin towards MTR in order to produce methionine (PubMed:16769880, PubMed:27771510).

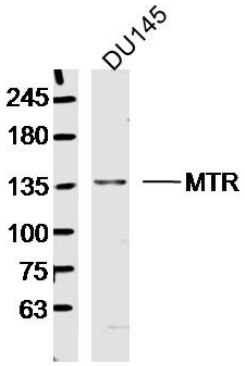
Cellular Location Cytoplasm.

Tissue Location Widely expressed. Expressed at the highest levels in pancreas, heart, brain, skeletal muscle and placenta (PubMed:8968735, PubMed:8968737). Expressed at lower levels in lung, liver and kidney (PubMed:8968735, PubMed:8968737)

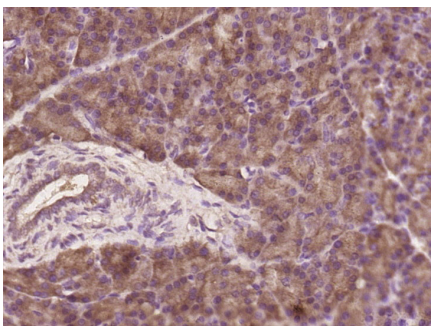
Background

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Images



Sample: DU145 Cell (Human) Lysate at 40 ug
Primary: Anti-MTR (AP56887) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 140 kD
Observed band size: 140 kD



Paraformaldehyde-fixed, paraffin embedded (rat pancreas tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (MTR) Polyclonal Antibody, Unconjugated (AP56887) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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