Datasheet for ABIN3136357

MTRR Protein (AA 1-696) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	MTRR
Protein Characteristics:	AA 1-696
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MTRR protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	MRRFLLLYAT QRGQAKAIAE EISEQAVSHG FSADLHCISE SEKYDLKTET GPLVMVVSTT GTGDPPDTAR KFVKEIHNKT LPTDYFAHLR YGLLGLGDSE YTYFCNGGKV IDKRLQELGA QRFYDTGHAD DCVGLELVVE PWIDGLWAAL TKHFKSLGGQ ENMSDTLSRA SDAPLSTAMK PELLHIQSQV ELLRLEDVGE RDSELREQNE TNRGQQGRIE DFDSSLVHSV PPLSQSSLSI PAVPPEYLEV HLQESLGQEE NQASVPSGDP SFQVPISKAI RLTTNDAVKS TLLLELDISK IEFSHQPGDS FNVTCPNSDR EVEELLQRLQ LADKRAHRVI LKIKTDTKKK GAALPAHVPE GRSLQFILTW CLEIRAVPKK AFLRALAEHT SSATEKRRLQ ELCSKQGAAD YNRFIRDASV CLLDLLLTFP SCQPPLSLLL EHLPKLQPRP YSCASSSLRH PDKLHFVFNI VEFPPSTTAA SPRKGVCTGW LATLVAPFLQ PNTDVSNADS GDTLAPEIRI SPRATNAFHL PEDPSAPIIM VGPGTGVAPF VGFLQHREKL QEQHPDGKFG AMWLFFGCRH KDRDYLFREE LRHFLKTGVL THLKVSFSRD AAPDGEEAPA KYVQDNLQRH SQQVARTLLQ ENGYIYVCGD AKNMAKDVND

	TLIGIISNEA GVDKLEAMKT LATLKQEKRY LQDIWS **Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Characteristics:	Key Benefits: • Made in Germany - from design to production - by highly experienced protein experts. • Protein expressed with ALiCE® and purified in one-step affinity chromatography • These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed). • State-of-the-art algorithm used for plasmid design (Gene synthesis). This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein. The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. Expression System: • ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. • During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein! Concentration: • The concentration of our recombinant proteins is measured using the absorbance at 280nm. • The protein's absorbance will be measured against its specific reference buffer. • We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.
Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).

Product Details

Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	MTRR
Alternative Name:	Mtrr (MTRR Products)
Background:	Methionine synthase reductase (MSR) (EC 1.16.1.8) (Aquacobalamin reductase) (AqCbl reductase),FUNCTION: Key enzyme in methionine and folate homeostasis responsible for the reactivation of methionine synthase (MTR/MS) activity by catalyzing the reductive methylation of MTR-bound cob(II)alamin. Cobalamin (vitamin B12) forms a complex with MTR to serve as an intermediary in methyl transfer reactions that cycles between MTR-bound methylcob(III)alamin and MTR bound-cob(I)alamin forms, and occasional oxidative escape of the cob(I)alamin intermediate during the catalytic cycle leads to the inactive cob(II)alamin species. The processing of cobalamin in the cytosol occurs in a multiprotein complex composed of at least MMACHC, MMADHC, MTRR and MTR which may contribute to shuttle safely and efficiently cobalamin towards MTR in order to produce methionine (By similarity). Also necessary for the utilization of methyl groups from the folate cycle, thereby affecting transgenerational epigenetic inheritance (PubMed:24074862). Also acts as a molecular chaperone for methionine synthase by stabilizing apoMTR and incorporating methylcob(III)alamin into apoMTR to form the holoenzyme. Also serves as an aquacob(III)alamin reductase by reducing aquacob(III)alamin to cob(II)alamin, this reduction leads to stimulation of the conversion of apoMTR and aquacob(III)alamin to MTR holoenzyme (By similarity). {ECO:0000250|UniProtKB:Q9UBK8, ECO:0000269|PubMed:24074862}.
Molecular Weight:	77.5 kDa
UniProt:	Q8C1A3
Pathways:	Methionine Biosynthetic Process

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from

Application Details

	Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months