Datasheet for ABIN7553317

CTH Protein (AA 1-405) (His tag)

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Overview

Quantity:	1 mg
Target:	CTH
Protein Characteristics:	AA 1-405
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CTH protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat CTH Protein expressed in mammalien cells.
Sequence:	MQEKDASSQG FLPHFQHFAT QAIHVGQDPE QWTSRAVVPP ISLSTTFKQG APGQHSGFEY SRSGNPTRNC LEKAVAALDG AKYCLAFASG LAATVTITHL LKAGDQIICM DDVYGGTNRY FRQVASEFGL KISFVDCSKI KLLEAAITPE TKLVWIETPT NPTQKVIDIE GCAHIVHKHG DIILVVDNTF MSPYFQRPLA LGADISMYSA TKYMNGHSDV VMGLVSVNCE SLHNRLRFLQ NSLGAVPSPI DCYLCNRGLK TLHVRMEKHF KNGMAVAQFL ESNPWVEKVI YPGLPSHPQH ELVKRQCTGC TGMVTFYIKG TLQHAEIFLK NLKLFTLAES LGGFESLAEL PAIMTHASVL KNDRDVLGIS DTLIRLSVGL EDEEDLLEDL DQALKAAHPP SGSHS **Sequence without tag. The proposed Purification-Tag is based on experiences 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:

Product Details

	• Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	CTH
Alternative Name:	CTH (CTH Products)
Background:	Cystathionine gamma-lyase (CGL) (CSE) (EC 4.4.1.1) (Cysteine desulfhydrase) (Cysteine-protein sulfhydrase) (Gamma-cystathionase) (Homocysteine desulfhydrase) (EC 4.4.1.2),FUNCTION: Catalyzes the last step in the trans-sulfuration pathway from L-methionine to L-cysteine in a pyridoxal-5'-phosphate (PLP)-dependent manner, which consists on cleaving the L,L-cystathionine molecule into L-cysteine, ammonia and 2-oxobutanoate (PubMed:10212249, PubMed:19261609, PubMed:19961860, PubMed:18476726). Part of the L-cysteine derived from the trans-sulfuration pathway is utilized for biosynthesis of the ubiquitous antioxidant glutathione (PubMed:18476726). Besides its role in the conversion of L-cystathionine into L-cysteine, it utilizes L-cysteine and L-homocysteine as substrates (at much lower rates than L,L-cystathionine) to produce the endogenous gaseous signaling molecule hydrogen sulfide (H2S) (PubMed:10212249, PubMed:19261609, PubMed:19961860, PubMed:19019829). In vitro, it converts two L-cysteine molecules into lanthionine and H2S, also two L-homocysteine molecules to homolanthionine and H2S, which can be particularly relevant under conditions of severe hyperhomocysteinemia (which is a risk factor for cardiovascular disease, diabetes, and

Target Details

	Alzheimer's disease) (PubMed:19261609). Lanthionine and homolanthionine are structural homologs of L,L-cystathionine that differ by the absence or presence of an extra methylene group, respectively (PubMed:19261609). Acts as a cysteine-protein sulfhydrase by mediating sulfhydration of target proteins: sulfhydration consists of converting -SH groups into -SSH on specific cysteine residues of target proteins such as GAPDH, PTPN1 and NF-kappa-B subunit RELA, thereby regulating their function (PubMed:22169477). By generating the gasotransmitter H2S, it participates in a number of physiological processes such as vasodilation, bone protection, and inflammation (Probable) (PubMed:29254196). Plays an essential role in myogenesis by contributing to the biogenesis of H2S in skeletal muscle tissue (By similarity). Can also accept homoserine as substrate (By similarity). Catalyzes the elimination of selenocystathionine (which can be derived from the diet) to yield selenocysteine, ammonia and 2-oxobutanoate (By similarity). {ECO:0000250|UniProtKB:P18757, ECO:0000250|UniProtKB:Q8VCN5, ECO:0000269|PubMed:10212249, ECO:0000269|PubMed:18476726, ECO:0000269|PubMed:19019829, ECO:0000269|PubMed:19261609, ECO:0000269|PubMed:19961860, ECO:0000269|PubMed:22169477, ECO:0000269|PubMed:29254196, ECO:0000303|PubMed:18476726, ECO:0000305|PubMed:18476726, ECO:0000305|PubMed:19019829}.
Molecular Weight:	44.5 kDa
UniProt:	P32929
Pathways:	ER-Nucleus Signaling, Warburg Effect

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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.

Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months