Datasheet for ABIN7551831

ACSS2 Protein (AA 1-701) (His tag)

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Overview

Quantity:	1 mg
Target:	ACSS2
Protein Characteristics:	AA 1-701
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This ACSS2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant ACSS2 Protein expressed in mammalian cells.
Sequence:	MGLPEERVRS GSGSRGQEEA GAGGRARSWS PPPEVSRSAH VPSLQRYREL HRRSVEEPRE FWGDIAKEFY WKTPCPGPFL RYNFDVTKGK IFIEWMKGAT TNICYNVLDR NVHEKKLGDK VAFYWEGNEP GETTQITYHQ LLVQVCQFSN VLRKQGIQKG DRVAIYMPMI PELVVAMLAC ARIGALHSIV FAGFSSESLC ERILDSSCSL LITTDAFYRG EKLVNLKELA DEALQKCQEK GFPVRCCIVV KHLGRAELGM GDSTSQSPPI KRSCPDVQIS WNQGIDLWWH ELMQEAGDEC EPEWCDAEDP LFILYTSGST GKPKGVVHTV GGYMLYVATT FKYVFDFHAE DVFWCTADIG WITGHSYVTY GPLANGATSV LFEGIPTYPD VNRLWSIVDK YKVTKFYTAP TAIRLLMKFG DEPVTKHSRA SLQVLGTVGE PINPEAWLWY HRVVGAQRCP IVDTFWQTET GGHMLTPLPG ATPMKPGSAT FPFFGVAPAI LNESGEELEG EAEGYLVFKQ PWPGIMRTVY GNHERFETTY FKKFPGYYVT GDGCQRDQDG YYWITGRIDD MLNVSGHLLS TAEVESALVE HEAVAEAAVV GHPHPVKGEC LYCFVTLCDG HTFSPKLTEE LKKQIREKIG PIATPDYIQN APGLPKTRSG KIMRRVLRKI AQNDHDLGDM STVADPSVIS HLFSHRCLTI Q **Sequence without tag. The**

Product Details

	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.
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian 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, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	ACSS2
Alternative Name:	ACSS2 (ACSS2 Products)
Background:	Acetyl-coenzyme A synthetase, cytoplasmic (EC 6.2.1.1) (Acetate--CoA ligase) (Acetyl-CoA synthetase) (ACS) (AceCS) (Acetyl-CoA synthetase 1) (AceCS1) (Acyl-CoA synthetase short-chain family member 2) (Acyl-activating enzyme) (Propionate--CoA ligase) (EC 6.2.1.17),FUNCTION: Catalyzes the synthesis of acetyl-CoA from short-chain fatty acids (PubMed:10843999, PubMed:28003429, PubMed:28552616). Acetate is the preferred substrate (PubMed:10843999, PubMed:28003429). Can also utilize propionate with a much lower affinity (By similarity). Nuclear ACSS2 promotes glucose deprivation-induced lysosomal biogenesis and autophagy, tumor cell survival and brain tumorigenesis (PubMed:28552616). Glucose

Target Details

	deprivation results in AMPK-mediated phosphorylation of ACSS2 leading to its translocation to the nucleus where it binds to TFEB and locally produces acetyl-CoA for histone acetylation in the promoter regions of TFEB target genes thereby activating their transcription (PubMed:28552616). The regulation of genes associated with autophagy and lysosomal activity through ACSS2 is important for brain tumorigenesis and tumor survival (PubMed:28552616). Acts as a chromatin-bound transcriptional coactivator that up-regulates histone acetylation and expression of neuronal genes (By similarity). Can be recruited to the loci of memory-related neuronal genes to maintain a local acetyl-CoA pool, providing the substrate for histone acetylation and promoting the expression of specific genes, which is essential for maintaining long-term spatial memory (By similarity). {ECO:0000250|UniProtKB:Q9QXG4, ECO:0000269|PubMed:10843999, ECO:0000269|PubMed:28003429, ECO:0000269|PubMed:28552616}.
Molecular Weight:	78.6 kDa
UniProt:	Q9NR19

Application Details

Application Notes:	We expect the protein to work for functional studies. 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.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months