Datasheet for ABIN3136667

DACT1 Protein (AA 1-778) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	DACT1
Protein Characteristics:	AA 1-778
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DACT1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MKPDAAREPE PLSPGRGAEA EGRWRERGEA DTERQRTRER QEATLAGLAE LGYLRQRQEL LVRGALRCSG TVGTVAPRSG ELRGDAAQRS RLEEKFLEEN ILLLRRQLNC LRRRDAGLLN QLQELDKQIS DLRLDVEKTS EEHLETDSRP SSGFYELSDG ASGSLSNSSN SVFSECLSSC HSSTCFCSPL EAALTISDGC PKSADVNPKY QCDLVSKNGN DVYRYPSPLH AVAVQSPMFL LCLTGNTLRE EEGLGSHASD ICIGSELNAT KTDNSLPSPS SLWSASHPAS SKKMDGYILS LVQKKTHPVR TNKPRTSVNA DPTKGLLRNG SVCVRAPSGV PPGSSVNFKN TKQMCLPAGG ITSLENGPFS PPKQRSKDSK TDQLESKRLA LPESCSAGAA MEPQSKHVPK AAKAASQELT RCQAGLGESM KESNQASAVS PKTSPGRGPV APAESKALQL PKKMSQKNSL QAVPALDRPA LDFKSEGSSQ SLEEGHLVKA QFIPGQQAAA RPHRAHRNPG VARSATLKAR GQAAMEHGLP TVREKPRAAG KKCRFPDDSD TNKKFRKTSA KGRRSGGLQD AGLPGRALGT GGHRAGSRAH AHGREPVVAK PKHKRTDYRR WKSSAEVSYE EALRRARRAR REHGAAYRVA VALPYASPYA

YVPSDSEYSA ECESLFHSTV VDTSEDEQSN YTTNCFGDSE SSVSEGDFVG ESTTTSDSEE SGGLIWSQFV QTLPIQTVTA PDLHTRPTKT FVKIKASHNL KKKILRFRSG SLKLMTTV

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:	DACT1
Alternative Name:	Dact1 (DACT1 Products)
Background:	Dapper homolog 1 (Dapper antagonist of catenin 1) (Frodo homolog) (MDpr1) (Thymus-expressed novel gene 3 protein),FUNCTION: Involved in regulation of intracellular signaling pathways during development. Specifically thought to play a role in canonical and/or non-canonical Wnt signaling pathways through interaction with DSH (Dishevelled) family proteins. The activation/inhibition of Wnt signaling may depend on the phosphorylation status. Proposed to regulate the degradation of CTNNB1/beta-catenin, thereby modulating the transcriptional activation of target genes of the Wnt signaling pathway. Its function in stabilizing CTNNB1 may involve inhibition of GSK3B activity. Promotes the membrane localization of CTNNB1. The cytoplasmic form can induce DVL2 degradation via a lysosome-dependent mechanism, the function is inhibited by PKA-induced binding to 14-3-3 proteins, such as YWHAB (By similarity). Seems to be involved in morphogenesis at the primitive streak by regulating VANGL2 and DVL2, the function seems to be independent of canonical Wnt signaling and rather involves the non-canonical Wnt/planar cell polarity (PCP) pathway. The nuclear form may prevent the formation of LEF1:CTNNB1 complex and recruit HDAC1 to LEF1 at target gene promoters to repress transcription thus antagonizing Wnt signaling (By similarity). May be involved in positive regulation of fat cell differentiation. During neuronal differentiation may be involved in excitatory synapse organization, and dendrite formation and establishment of spines. {ECO:0000250, ECO:0000269|PubMed:17197390, ECO:0000269|PubMed:19073771, ECO:0000269|PubMed:19701191, ECO:0000269|PubMed:20145239, ECO:0000269|PubMed:20335472}.
Molecular Weight:	84.3 kDa
UniProt:	Q8R4A3
Pathways:	Positive Regulation of fat Cell Differentiation

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

Application Details

	guarantee though.
Comment:	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!
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