Datasheet for ABIN3134425

POLD1 Protein (AA 1-1105) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	POLD1
Protein Characteristics:	AA 1-1105
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This POLD1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	MDCKRRQGPG PGVPPKRARG HLWDEDEPSP SQFEANLALL EEIEAENRLQ EAEEELQLPP EGTVGGQFST ADIDPRWRRP TLRALDPSTE PLIFQQLEID HYVGSAPPLP EGPLPSRNSV PILRAFGVTD EGFSVCCHIQ GFAPYFYTPA PPGFGAEHLS ELQQELNAAI SRDQRGGKEL SGPAVLAIEL CSRESMFGYH GHGPSPFLRI TLALPRLMAP ARRLLEQGVR VPGLGTPSFA PYEANVDFEI RFMVDADIVG CNWLELPAGK YVRRAEKKAT LCQLEVDVLW SDVISHPPEG QWQRIAPLRV LSFDIECAGR KGIFPEPERD PVIQICSLGL RWGEPEPFLR LALTLRPCAP ILGAKVQSYE REEDLLQAWA DFILAMDPDV ITGYNIQNFD LPYLISRAQA LKVDRFPFLG RVTGLRSNIR DSSFQSRQVG RRDSKVISMV GRVQMDMLQV LLREHKLRSY TLNAVSFHFL GEQKEDVQHS IITDLQNGNE QTRRRLAVYC LKDAFLPLRL LERLMVLVNN VEMARVTGVP LGYLLTRGQQ VKVVSQLLRQ AMRQGLLMPV VKTEGSEDYT GATVIEPLKG YYDVPIATLD FSSLYPSIMM AHNLCYTTLL RPGAAQKLGL KPDEFIKTPT GDEFVKSSVR KGLLPQILEN

LLSARKRAKA ELAQETDPLR RQVLDGRQLA LKVSANSVYG FTGAQVGKLP CLEISQSVTG FGRQMIEKTK QLVESKYTVE NGYDANAKVV YGDTDSVMCR FGVSSVAEAM SLGREAANWV SSHFPSPIRL EFEKVYFPYL LISKKRYAGL LFSSRSDAHD KMDCKGLEAV RRDNCPLVAN LVTSSLRRIL VDRDPDGAVA HAKDVISDLL CNRIDISQLV ITKELTRAAA DYAGKQAHVE LAERMRKRDP GSAPSLGDRV PYVIIGAAKG VAAYMKSEDP LFVLEHSLPI DTQYYLEQQL AKPLLRIFEP ILGEGRAESV LLRGDHTRCK TVLTSKVGGL LAFTKRRNCC IGCRSVIDHQ GAVCKFCQPR ESELYQKEVS HLNALEERFS RLWTQCQRCQ GSLHEDVICT SRDCPIFYMR KKVRKDLEDQ ERLLQRFGPP GPEAW

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:

Product Details

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

Target Details

Target:	POLD1
Alternative Name:	Pold1 (POLD1 Products)
Background:	DNA polymerase delta catalytic subunit (EC 2.7.7.7) (3'-5' exodeoxyribonuclease) (EC 3.1.11.-),FUNCTION: As the catalytic component of the trimeric (Pol-delta3 complex) and tetrameric DNA polymerase delta complexes (Pol-delta4 complex), plays a crucial role in high fidelity genome replication, including in lagging strand synthesis, and repair. Exhibits both DNA polymerase and 3'- to 5'-exonuclease activities. Requires the presence of accessory proteins POLD2, POLD3 and POLD4 for full activity. Depending upon the absence (Pol-delta3) or the presence of POLD4 (Pol-delta4), displays differences in catalytic activity. Most notably, expresses higher proofreading activity in the context of Pol-delta3 compared with that of Pol-delta4. Although both Pol-delta3 and Pol-delta4 process Okazaki fragments in vitro, Pol-delta3 may be better suited to fulfill this task, exhibiting near-absence of strand displacement activity compared to Pol-delta4 and stalling on encounter with the 5'-blocking oligonucleotides. Pol-delta3 idling process may avoid the formation of a gap, while maintaining a nick that can be readily ligated. Along with DNA polymerase kappa, DNA polymerase delta carries out approximately half of nucleotide excision repair (NER) synthesis following UV irradiation. Under conditions of DNA replication stress, in the presence of POLD3 and POLD4, may catalyze the repair of broken replication forks through break-induced replication (BIR). Involved in the translesion synthesis (TLS) of templates carrying O6-methylguanine, 8oxoG or abasic sites. {ECO:0000250|UniProtKB:P28340}.
Molecular Weight:	123.8 kDa
UniProt:	P52431
Pathways:	Telomere Maintenance, DNA Damage Repair, DNA Replication, Chromatin Binding, Synthesis of

Target Details

	DNA

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 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