

Datasheet for ABIN3092113
DDB2 Protein (AA 1-427) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	DDB2
Protein Characteristics:	AA 1-427
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DDB2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AliCE®
Sequence:	<p>MAPKKRPETQ KTSEIVLRPR NKRSRSPLEL EPEAKKLC AK GSGPSRRCD S DCLWVGLAGP QILPPCRSIV RTLHQHKLGR ASWPSVQQGL QQSFLHTLDS YRILQKAAPF DRRATSLAWH PTHPSTVAVG SKGGDIMLWN FGKDKPTFI KGIGAGGSIT GLKFNP LNTN QFYASSMEGT TRLQDFKGNI LRVFASSDTI NIWFCSLDVS ASSRMVVTGD NVGNVILLNM DGKELWNLRM HKKKVTHVAL NPCCDWFLAT ASVDQTVKIW DLRQVRGKAS FLYSLPHRHP VNAACFSPDG ARLLTTDQKS EIRVYSASQW DCPLGLIPHP HRHFQHLTP I KAAWHPRYNL IVVG RYPDPN FKSCTPYELR TIDVFDGNSG KMMCQLYDPE SSGISSLNEF NPMGDTLASA MGYHILIWSQ EEARTRK</p> <p>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.</p>

Product Details

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®).

Purity:

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

Grade:

custom-made

Target Details

Target:	DDB2
Alternative Name:	DDB2 (DDB2 Products)
Background:	<p>DNA damage-binding protein 2 (DDB p48 subunit) (DDBb) (Damage-specific DNA-binding protein 2) (UV-damaged DNA-binding protein 2) (UV-DDB 2),FUNCTION: Protein, which is both involved in DNA repair and protein ubiquitination, as part of the UV-DDB complex and DCX (DDB1-CUL4-X-box) complexes, respectively (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:9892649, PubMed:12732143, PubMed:15882621, PubMed:16473935, PubMed:18593899, PubMed:32789493). Core component of the UV-DDB complex (UV-damaged DNA-binding protein complex), a complex that recognizes UV-induced DNA damage and recruit proteins of the nucleotide excision repair pathway (the NER pathway) to initiate DNA repair (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:16260596, PubMed:12944386, PubMed:14751237, PubMed:32789493). The UV-DDB complex preferentially binds to cyclobutane pyrimidine dimers (CPD), 6-4 photoproducts (6-4 PP), apurinic sites and short mismatches (PubMed:10882109, PubMed:11278856, PubMed:11705987, PubMed:16260596, PubMed:12944386). Also functions as the substrate recognition module for the DCX (DDB2-CUL4-X-box) E3 ubiquitin-protein ligase complex DDB2-CUL4-ROC1 (also known as CUL4-DDB-ROC1 and CUL4-DDB-RBX1) (PubMed:12732143, PubMed:15882621, PubMed:16473935, PubMed:18593899, PubMed:26572825). The DDB2-CUL4-ROC1 complex may ubiquitinate histone H2A, histone H3 and histone H4 at sites of UV-induced DNA damage (PubMed:16678110, PubMed:16473935). The ubiquitination of histones may facilitate their removal from the nucleosome and promote subsequent DNA repair (PubMed:16678110, PubMed:16473935). The DDB2-CUL4-ROC1 complex also ubiquitinates XPC, which may enhance DNA-binding by XPC and promote NER (PubMed:15882621). The DDB2-CUL4-ROC1 complex also ubiquitinates KAT7/HBO1 in response to DNA damage, leading to its degradation: recognizes KAT7/HBO1 following phosphorylation by ATR (PubMed:26572825). {ECO:0000269 PubMed:10882109, ECO:0000269 PubMed:11278856, ECO:0000269 PubMed:11705987, ECO:0000269 PubMed:12732143, ECO:0000269 PubMed:12944386, ECO:0000269 PubMed:14751237, ECO:0000269 PubMed:15882621, ECO:0000269 PubMed:16260596, ECO:0000269 PubMed:16473935, ECO:0000269 PubMed:16678110, ECO:0000269 PubMed:18593899, ECO:0000269 PubMed:26572825, ECO:0000269 PubMed:32789493, ECO:0000269 PubMed:9892649}., FUNCTION: [Isoform D1]: Inhibits UV-damaged DNA repair. {ECO:0000269 PubMed:14751237}., FUNCTION: [Isoform D2]: Inhibits UV-damaged DNA repair. {ECO:0000269 PubMed:14751237}.</p>
Molecular Weight:	47.9 kDa

Target Details

UniProt:	Q92466
Pathways:	DNA Damage Repair

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
Restrictions:	For Research Use only

Handling

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