Datasheet for ABIN3092297

DYRK1A Protein (AA 1-763) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	DYRK1A
Protein Characteristics:	AA 1-763
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This DYRK1A protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	MHTGGETSAC KPSSVRLAPS FSFHAAGLQM AGQMPHSHQY SDRRQPNISD QQVSALSYSD QIQQPLTNQV MPDIVMLQRR MPQTFRDPAT APLRKLSVDL IKTYKHINEV YYAKKKRRHQ QGQGDDSSHK KERKVYNDGY DDDNYDYIVK NGEKWMDRYE IDSLIGKGSF GQVVKAYDRV EQEWVAIKII KNKKAFLNQA QIEVRLLELM NKHDTEMKYY IVHLKRHFMF RNHLCLVFEM LSYNLYDLLR NTNFRGVSLN LTRKFAQQMC TALLFLATPE LSIIHCDLKP ENILLCNPKR SAIKIVDFGS SCQLGQRIYQ YIQSRFYRSP EVLLGMPYDL AIDMWSLGCI LVEMHTGEPL FSGANEVDQM NKIVEVLGIP PAHILDQAPK ARKFFEKLPD GTWNLKKTKD GKREYKPPGT RKLHNILGVE TGGPGGRRAG ESGHTVADYL KFKDLILRML DYDPKTRIQP YYALQHSFFK KTADEGTNTS NSVSTSPAME QSQSSGTTSS TSSSSGGSSG TSNSGRARSD PTHQHRHSGG HFTAAVQAMD CETHSPQVRQ QFPAPLGWSG TEAPTQVTVE THPVQETTFH VAPQQNALHH HHGNSSHHHH HHHHHHHHHG QQALGNRTRP RVYNSPTNSS STQDSMEVGH SHHSMTSLSS

	STTSSSTSSS STGNQGNQAY QNRPVAANTL DFGQNGAMDV NLTVYSNPRQ ETGIAGHPTY QFSANTGPAH YMTEGHLTMR QGADREESPM TGVCVQQSPV ASS **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:	DYRK1A
Alternative Name:	DYRK1A (DYRK1A Products)
Background:	Dual specificity tyrosine-phosphorylation-regulated kinase 1A (EC 2.7.11.23) (EC 2.7.12.1) (Dual specificity YAK1-related kinase) (HP86) (Protein kinase minibrain homolog) (MNBH) (hMNB),FUNCTION: Dual-specificity kinase which possesses both serine/threonine and tyrosine kinase activities (PubMed:21127067, PubMed:8769099, PubMed:30773093, PubMed:20981014, PubMed:23665168). Exhibits a substrate preference for proline at position P+1 and arginine at position P-3 (PubMed:23665168). Plays an important role in double-strand breaks (DSBs) repair following DNA damage (PubMed:31024071). Mechanistically, phosphorylates RNF169 and increases its ability to block accumulation of TP53BP1 at the DSB sites thereby promoting homologous recombination repair (HRR) (PubMed:30773093). Also acts as a positive regulator of transcription by acting as a CTD kinase that mediates phosphorylation of the CTD (C-terminal domain) of the large subunit of RNA polymerase II (RNAP II) POLR2A (PubMed:25620562, PubMed:29849146). May play a role in a signaling pathway regulating nuclear functions of cell proliferation (PubMed:14500717). Modulates alternative splicing by phosphorylating the splice factor SRSF6 (By similarity). Has pro-survival function and negatively regulates the apoptotic process (By similarity). Promotes cell survival upon genotoxic stress through phosphorylation of SIRT1 (By similarity). This in turn inhibits p53/TP53 activity and apoptosis (By similarity). Phosphorylates SEPTIN4, SEPTIN5 and SF3B1 at 'Thr-434' (By similarity). {ECO:0000250|UniProtKB:Q61214, ECO:0000250|UniProtKB:Q63470, ECO:0000269|PubMed:14500717, ECO:0000269|PubMed:20981014, ECO:0000269|PubMed:21127067, ECO:0000269|PubMed:23665168, ECO:0000269|PubMed:25620562, ECO:0000269|PubMed:29849146, ECO:0000269|PubMed:30773093, ECO:0000269|PubMed:31024071, ECO:0000269|PubMed:8769099}.
Molecular Weight:	85.6 kDa
UniProt:	Q13627
Pathways:	Mitotic G1-G1/S Phases

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