Datasheet for ABIN7547250

DYRK3 Protein (AA 1-588) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	DYRK3
Protein Characteristics:	AA 1-588
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This DYRK3 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant DYRK3 Protein expressed in mammalian cells.
Sequence:	MGGTARGPGR KDAGPPGAGL PPQQRRLGDG VYDTFMMIDE TKCPPCSNVL CNPSEPPPPR RLNMTTEQFT GDHTQHFLDG GEMKVEQLFQ EFGNRKSNTI QSDGISDSEK CSPTVSQGKS SDCLNTVKSN SSSKAPKVVP LTPEQALKQY KHHLTAYEKL EIINYPEIYF VGPNAKKRHG VIGGPNNGGY DDADGAYIHV PRDHLAYRYE VLKIIGKGSF GQVARVYDHK LRQYVALKMV RNEKRFHRQA AEEIRILEHL KKQDKTGSMN VIHMLESFTF RNHVCMAFEL LSIDLYELIK KNKFQGFSVQ LVRKFAQSIL QSLDALHKNK IIHCDLKPEN ILLKHHGRSS TKVIDFGSSC FEYQKLYTYI QSRFYRAPEI ILGSRYSTPI DIWSFGCILA ELLTGQPLFP GEDEGDQLAC MMELLGMPPP KLLEQSKRAK YFINSKGIPR YCSVTTQADG RVVLVGGRSR RGKKRGPPGS KDWGTALKGC DDYLFIEFLK RCLHWDPSAR LTPAQALRHP WISKSVPRPL TTIDKVSGKR VVNPASAFQG LGSKLPPVVG IANKLKANLM SETNGSIPLC SVLPKLIS **Sequence without tag. The 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**

Product Details

	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:	DYRK3
Alternative Name:	DYRK3 (DYRK3 Products)
Background:	Dual specificity tyrosine-phosphorylation-regulated kinase 3 (EC 2.7.12.1) (Regulatory erythroid kinase) (REDK),FUNCTION: Dual-specificity protein kinase that promotes disassembly of several types of membraneless organelles during mitosis, such as stress granules, nuclear speckles and pericentriolar material (PubMed:29973724). Dual-specificity tyrosine-regulated kinases (DYRKs) autophosphorylate a critical tyrosine residue in their activation loop and phosphorylate their substrate on serine and threonine residues (PubMed:9748265, PubMed:29634919). Acts as a central dissolvase of membraneless organelles during the G2-to-M transition, after the nuclear-envelope breakdown: acts by mediating phosphorylation of multiple serine and threonine residues in unstructured domains of proteins, such as SRRM1 and PCM1 (PubMed:29973724). Does not mediate disassembly of all membraneless

Target Details

	organelles: disassembly of P-body and nucleolus is not regulated by DYRK3 (PubMed:29973724). Dissolution of membraneless organelles at the onset of mitosis is also required to release mitotic regulators, such as ZNF207, from liquid-unmixed organelles where they are sequestered and keep them dissolved during mitosis (PubMed:29973724). Regulates mTORC1 by mediating the dissolution of stress granules: during stressful conditions, DYRK3 partitions from the cytosol to the stress granule, together with mTORC1 components, which prevents mTORC1 signaling (PubMed:23415227). When stress signals are gone, the kinase activity of DYRK3 is required for the dissolution of stress granule and mTORC1 relocation to the cytosol: acts by mediating the phosphorylation of the mTORC1 inhibitor AKT1S1, allowing full reactivation of mTORC1 signaling (PubMed:23415227). Also acts as a negative regulator of EPO-dependent erythropoiesis: may place an upper limit on red cell production during stress erythropoiesis (PubMed:10779429). Inhibits cell death due to cytokine withdrawal in hematopoietic progenitor cells (PubMed:10779429). Promotes cell survival upon genotoxic stress through phosphorylation of SIRT1: this in turn inhibits p53/TP53 activity and apoptosis (PubMed:20167603). {ECO:0000269|PubMed:10779429, ECO:0000269|PubMed:20167603, ECO:0000269|PubMed:23415227, ECO:0000269|PubMed:29634919, ECO:0000269|PubMed:29973724, ECO:0000269|PubMed:9748265}.
Molecular Weight:	65.7 kDa
UniProt:	O43781
Pathways:	Negative Regulation of Hormone Secretion, Regulation of Lipid Metabolism by PPARalpha

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.

Handling

Expiry Date:	12 months