Datasheet for ABIN3096292

# HISPPD1 Protein (AA 1-1243) (Strep Tag)

1 Image

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## Overview

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| Quantity: | 1 mg |
| Target: | HISPPD1 (PPIP5K2) |
| Protein Characteristics: | AA 1-1243 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This HISPPD1 protein is labelled with Strep Tag. |
| Application: | SDS-PAGE (SDS), Western Blotting (WB), ELISA |

## Product Details

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| Sequence: | MSEAPRFFVG PEDTEINPGN YRHFFHHADE DDEEEDDSPP ERQIVVGICS MAKKSKSKPM KEILERISLF KYITVVVFEE EVILNEPVEN WPLCDCLISF HSKGFPLDKA VAYAKLRNPF VINDLNMQYL IQDRREVYSI LQAEGILLPR YAILNRDPNN PKECNLIEGE DHVEVNGEVF QKPFVEKPVS AEDHNVYIYY PTSAGGGSQR LFRKIGSRSS VYSPESNVRK TGSYIYEEFM PTDGTDVKVY TVGPDYAHAE ARKSPALDGK VERDSEGKEV RYPVILNARE KLIAWKVCLA FKQTVCGFDL LRANGQSYVC DVNGFSFVKN SMKYYDDCAK ILGNIVMREL APQFHIPWSI PLEAEDIPIV PTTSGTMMEL RCVIAVIRHG DRTPKQKMKM EVRHQKFFDL FEKCDGYKSG KLKLKKPKQL QEVLDIARQL LMELGQNNDS EIEENKPKLE QLKTVLEMYG HFSGINRKVQ LTYLPHGCPK TSSEEEDSRR EEPSLLLVLK WGGELTPAGR VQAEELGRAF RCMYPGGQGD YAGFPGCGLL RLHSTYRHDL KIYASDEGRV QMTAAAFAKG LLALEGELTP ILVQMVKSAN MNGLLDSDSD SLSSCQQRVK ARLHEILQKD RDFTAEDYEK LTPSGSISLI KSMHLIKNPV KTCDKVYSLI QSLTSQIRHR MEDPKSSDIQ LYHSETLELM LRRWSKLEKD FKTKNGRYDI |

SKIPDIYDCI KYDVQHNGSL KLENTMELYR LSKALADIVI PQEYGITKAE KLEIAKGYCT PLVRKIRSDL QRTQDDDTVN KLHPVYSRGV LSPERHVRTR LYFTSESHVH SLLSILRYGA LCNESKDEQW KRAMDYLNVV NELNYMTQIV IMLYEDPNKD LSSEERFHVE LHFSPGAKGC EEDKNLPSGY GYRPASRENE GRRPFKIDND DEPHTSKRDE VDRAVILFKP MVSEPIHIHR KSPLPRSRKT ATNDEESPLS VSSPEGTGTW LHYTSGVGTG RRRRRSGEQI TSSPVSPKSL AFTSSIFGSW QQVVSENANY LRTPRTLVEQ KQNPTVGSHC AGLFSTSVLG GSSSAPNLQD YARTHRKKLT SSGCIDDATR GSAVKRFSIS FARHPTNGFE LYSMVPSICP LETLHNALSL KQVDEFLASI ASPSSDVPRK TAEISSTALR SSPIMRKKVS LNTYTPAKIL PTPPATLKST KASSKPATSG PSSAVVPNTS SRKKNITSKT ETHEHKKNTG KKK

**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 by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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!

## Product Details

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| | Concentration:<br>• The concentration of our recombinant proteins is measured using the absorbance at 280nm.<br>• The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.<br>• We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein. |
| Purification: | Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):<br>1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.<br>2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot. |
| Purity: | >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. |
| Endotoxin Level: | Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg) |
| Grade: | Crystallography grade |

## Target Details

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| Target: | HISPPD1 (PPIP5K2) |
| Alternative Name: | PPIP5K2 (PPIP5K2 Products) |
| Background: | Inositol hexakisphosphate and diphosphoinositol-pentakisphosphate kinase 2 (EC 2.7.4.24) (Diphosphoinositol pentakisphosphate kinase 2) (Histidine acid phosphatase domain-containing protein 1) (InsP6 and PP-IP5 kinase 2) (VIP1 homolog 2) (hsVIP2),FUNCTION: Bifunctional inositol kinase that acts in concert with the IP6K kinases IP6K1, IP6K2 and IP6K3 to synthesize the diphosphate group-containing inositol pyrophosphates diphosphoinositol pentakisphosphate, PP-InsP5, and bis-diphosphoinositol tetrakisphosphate, (PP)2-InsP4 (PubMed:17690096, PubMed:17702752, PubMed:21222653, PubMed:29590114). PP-InsP5 and (PP)2-InsP4, also respectively called InsP7 and InsP8, regulate a variety of cellular processes, including apoptosis, vesicle trafficking, cytoskeletal dynamics, exocytosis, insulin signaling and neutrophil activation (PubMed:17690096, PubMed:17702752, PubMed:21222653, PubMed:29590114). Phosphorylates inositol hexakisphosphate (InsP6) at position 1 to produce PP-InsP5 which is in turn phosphorylated by IP6Ks to produce (PP)2-InsP4 (PubMed:17690096, PubMed:17702752). Alternatively, phosphorylates PP-InsP5 at position 1, produced by IP6Ks |

## Target Details

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| | from InsP6, to produce (PP)2-InsP4 (PubMed:17690096, PubMed:17702752). Required for normal hearing (PubMed:29590114). {ECO:0000269\|PubMed:17690096, ECO:0000269\|PubMed:17702752, ECO:0000269\|PubMed:21222653, ECO:0000269\|PubMed:29590114}. |
| Molecular Weight: | 140.4 kDa |
| UniProt: | O43314 |
| Pathways: | Inositol Metabolic Process |

## Application Details

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| 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.<br>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

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |

 

## Handling

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| Expiry Date: | Unlimited (if stored properly) |

## Images


**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process