Datasheet for ABIN7547121

# APPL2 Protein (AA 1-664) (His tag)

Go to Product page

## Overview

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| Quantity: | 1 mg |
| Target: | APPL2 |
| Protein Characteristics: | AA 1-664 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This APPL2 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant APPL2 Protein expressed in mammalian cells. |
| Sequence: | MPAVDKLLLE EALQDSPQTR SLLSVFEEDA GTLTDYTNQL LQAMQRVYGA QNEMCLATQQ LSKQLLAYEK QNFALGKGDE EVISTLHYFS KVVDELNLLH TELAKQLADT MVLPIIQFRE KDLTEVSTLK DLFGLASNEH DLSMAKYSRL PKKKENEKVK TEVGKEVAAA RRKQHLSSLQ YYCALNALQY RKQMAMMEPM IGFAHGQINF FKKGAEMFSK RMDSFLSSVA DMVQSIQVEL EAEAEKMRVS QQELLSVDES VYTPDSDVAA PQINRNLIQK AGYLNLRNKT GLVTTTWERL YFFTQGGNLM CQPRGAVAGG LIQDLDNCSV MAVDCEDRRY CFQITTPNGK SGIILQAESR KENEEWICAI NNISRQIYLT DNPEAVAIKL NQTALQAVTP ITSFGKKQES SCPSQNLKNS EMENENDKIV PKATASLPEA EELIAPGTPI QFDIVLPATE FLDQNRGSRR TNPFGETEDE SFPEAEDSLL QQMFIVRFLG SMAVKTDSTT EVIYEAMRQV LAARAIHNIF RMTESHLMVT SQSLRLIDPQ TQVSRANFEL TSVTQFAAHQ ENKRLVGFVI RVPESTGEES LSTYIFESNS EGEKICYAIN LGKEIIEVQK DPEALAQLML SIPLTNDGKY VLLNDQPDDD DGNPNEHRGA ESEA<br>**Sequence without tag. The proposed Purification-Tag is based on experiences with the** |

## Product Details

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| | **expression system, a different complexity of the protein could make another tag necessary. In case you have a 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:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>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.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>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

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| Target: | APPL2 |
| Alternative Name: | APPL2 (APPL2 Products) |
| Background: | DCC-interacting protein 13-beta (Dip13-beta) (Adapter protein containing PH domain, PTB domain and leucine zipper motif 2),FUNCTION: Multifunctional adapter protein that binds to various membrane receptors, nuclear factors and signaling proteins to regulate many processes, such as cell proliferation, immune response, endosomal trafficking and cell metabolism (PubMed:26583432, PubMed:15016378, PubMed:24879834). Regulates signaling pathway leading to cell proliferation through interaction with RAB5A and subunits of the NuRD/MeCP1 complex (PubMed:15016378). Plays a role in immune response by modulating phagocytosis, inflammatory and innate immune responses. In macrophages, enhances Fc-gamma receptor-mediated phagocytosis through interaction with RAB31 leading to activation |

## Target Details

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| | of PI3K/Akt signaling. In response to LPS, modulates inflammatory responses by playing a key role on the regulation of TLR4 signaling and in the nuclear translocation of RELA/NF-kappa-B p65 and the secretion of pro- and anti-inflammatory cytokines. Also functions as a negative regulator of innate immune response via inhibition of AKT1 signaling pathway by forming a complex with APPL1 and PIK3R1 (By similarity). Plays a role in endosomal trafficking of TGFBR1 from the endosomes to the nucleus (PubMed:26583432). Plays a role in cell metabolism by regulating adiponecting ans insulin signaling pathways and adaptative thermogenesis (PubMed:24879834) (By similarity). In muscle, negatively regulates adiponectin-simulated glucose uptake and fatty acid oxidation by inhibiting adiponectin signaling pathway through APPL1 sequestration thereby antagonizing APPL1 action (By similarity). In muscles, negativeliy regulates insulin-induced plasma membrane recruitment of GLUT4 and glucose uptake through interaction with TBC1D1 (PubMed:24879834). Plays a role in cold and diet-induced adaptive thermogenesis by activating ventromedial hypothalamus (VMH) neurons throught AMPK inhibition which enhances sympathetic outflow to subcutaneous white adipose tissue (sWAT), sWAT beiging and cold tolerance (By similarity). Also plays a role in other signaling pathways namely Wnt/beta-catenin, HGF and glucocorticoid receptor signaling (PubMed:19433865) (By similarity). Positive regulator of beta-catenin/TCF-dependent transcription through direct interaction with RUVBL2/reptin resulting in the relief of RUVBL2-mediated repression of beta-catenin/TCF target genes by modulating the interactions within the beta-catenin-reptin-HDAC complex (PubMed:19433865). May affect adult neurogenesis in hippocampus and olfactory system via regulating the sensitivity of glucocorticoid receptor. Required for fibroblast migration through HGF cell signaling (By similarity). {ECO:0000250\|UniProtKB:Q8K3G9, ECO:0000269\|PubMed:15016378, ECO:0000269\|PubMed:19433865, ECO:0000269\|PubMed:24879834, ECO:0000269\|PubMed:26583432}. |
| Molecular Weight: | 74.5 kDa |
| UniProt: | Q8NEU8 |

## Application Details

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| 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

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| 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. |
| Expiry Date: | 12 months |