

Product datasheet for **TP509855**

Appl2 (NM_145220) Mouse Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Purified recombinant protein of Mouse adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing 2 (Appl2), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug
Species:	Mouse
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>MR209855 protein sequence Red =Cloning site Green =Tags(s)

MPAVDKLLLEALQDSPQARSLLSVFEEDAGTLTDYTNQLLQAMQRVYGAQNEMCLATQQLSRQLLAYEK
QNFALGKGDDEEVISTLHYFSKVMDELNGLHTELAQLADTMVLPVIQFREKDLTEVSTLKDIFGLASSEH
DLSMAKYSRLPKKKENEKAKTEIVKEVAARRKQHLSSLQYYCALNALQYRKRAAMMEPLIGFAHGQINF
FKRGAEMFSKSMDFLSSVKDMVQSIQVELEAEADKMRVSSQQLSVSESVYTPDIDVATAQINRNLIQK
TGYNLNRNKTGLVTTTWERLYFFTQGGNLMCQPRGAVAGGLIQDLNCSVMAVDCEDRRYCFQISTPSGK
PGIILQAESRKEYEEWICAVNNISRQIYLTDNPEAVAIAIKLNQTALQAVTPITSFGKKQESSCSSQNIKNS
DIEDDNIVPKATASIPETEELIAPGTPIQFDIVLPATEFLDQNRGRRTPNPFGETEDGSPFEAEDSLLQQ
MFIVRFLGSMVAKTDSTAEEVIYEAQRVLAARAIHNIFRMTESHLMVTSQTLRLIDPQTQVSRACFELTS
VTQFAAHQENKRLVGFVIRVPESTGEESLSTYIFESNSEGEKICYAINLGKEIIEVQKDPEALARLMLS
VPLTNDGKYVLLNDQADDTGGSPSENRAESEA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag:	C-MYC/DDK
Predicted MW:	73.9 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol
Note:	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
Storage:	Store at -80°C after receiving vials.



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Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	NP_660255
Locus ID:	216190
UniProt ID:	Q8K3G9 , Q3TVI6
RefSeq Size:	2958
Cytogenetics:	10 C1
RefSeq ORF:	1989
Synonyms:	Dip3b

Summary:

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:25568335, PubMed:27219021, PubMed:25328665, PubMed:19661063, PubMed:29467283). Regulates signaling pathway leading to cell proliferation through interaction with RAB5A and subunits of the NuRD/MeCP1 complex (By similarity). Plays a role in immune response by modulating phagocytosis, inflammatory and innate immune responses (PubMed:25568335, PubMed:27219021, PubMed:25328665). In macrophages, enhances Fc-gamma receptor-mediated phagocytosis through interaction with RAB31 leading to activation of PI3K/Akt signaling (PubMed:25568335). 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 (PubMed:27219021). Also functions as a negative regulator of innate immune response via inhibition of AKT1 signaling pathway by forming a complex with APPL1 and PIK3R1 (PubMed:25328665). Plays a role in endosomal trafficking of TGFBR1 from the endosomes to the nucleus (By similarity). plays a role in cell metabolism by regulating adiponectin and insulin signaling pathways and adaptive thermogenesis (PubMed:19661063, PubMed:29467283) (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 (PubMed:19661063). In muscles, negatively regulates insulin-induced plasma membrane recruitment of GLUT4 and glucose uptake through interaction with TBC1D1 (By similarity). Plays a role in cold and diet-induced adaptive thermogenesis by activating ventromedial hypothalamus (VMH) neurons through AMPK inhibition which enhances sympathetic outflow to subcutaneous white adipose tissue (sWAT), sWAT being and cold tolerance (PubMed:29467283). Also plays a role in other signaling pathways namely Wnt/beta-catenin, HGF and glucocorticoid receptor signaling (PubMed:28965332, PubMed:29675572, PubMed:26445298). 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 (By similarity). May affect adult neurogenesis in hippocampus and olfactory system via regulating the sensitivity of glucocorticoid receptor (PubMed:28965332, PubMed:29675572). Required for fibroblast migration through HGF cell signaling (PubMed:26445298).[UniProtKB/Swiss-Prot Function]