

Product datasheet for **MC205876**

Appl2 (NM_145220) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Appl2 (NM_145220) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Appl2
Synonyms:	Dip3b
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC048906
 GCGCTCCCTCGCCGCGCCATGCCGCGGTGGACAAGCTCCTGCTGGAGGAGGCGCTGCAGGACAGCC
 CCCAGGCGCGCTCCTTGCTGAGTGTATTTGAAGAAGATGCTGGCACCCCTCACAGATTACACCAACCAGCT
 GCTGCAGGCCATGCAGCGTGTCTATGGCGCACAGAATGAAATGTGCTGGCCACTCAGCAGCTTCCAGG
 CAGCTGCTGGCATATGAAAAACAGAATTTGACTGGGCAAAGGCGATGAAGAAGTAATTTCAACTAC
 ATTATTTTTCCAAAGTGATGGATGAGCTCAATGGTCTCCACACAGAGCTGGCCAAGCAACTGGCAGACAC
 TATGGTTCTCCCTGTTATACAGTTTCGAGAGAAGGATCTCACAGAAGTCAGCACTTTGAAGGATCTCTTT
 GGACTTGGCAGCAGCAGCACGACTGTCAATGGCAAAGTATAGCAGGCTCCCTAAGAAGAAGGAGAACG
 AGAAGGCGAAGACGGAATTTGTGAAAGAGGTGGCGGCTGCCCGGCGAAACAGCACCTCTCATCCCTTCA
 GTACTACTGCGCACTCAACGCACTGCAGTACCGCAAGCGGGCGCCATGATGGAACCTTGATAGGCTTT
 GCCCACGGACAGATCAACTTTTTCAAGAGAGGAGCAGAGATGTTCTCCAAAAGTATGGACGGCTTCTTGT
 CATCCGTTAAAGACATGGTTCAGAGCATTACAGGTGGAAGCTGAGGCAGACAAGTGCAGGCTGC
 CCAGCAAGAGTTGCTTTCGGTCAGTGAATCTGTTTACACTCCGGACATTGATGTGGCCACAGCGCAGATC
 AACAGGAACCTCATCCAGAAGACTGGTTACCTCAATCTCAGAAACAAGACCGGACTGGTCACCACCAGT
 GGGAGAGGCTGTACTTTCACCCAAGGCGGAACTCATGTGCCAGCCCGGGGCGCTGTGGCTGGAGG
 CTTGATTACAGGACTGGACAACCTGCTGTGTATGGCCGTGGATTGTGAAGACCGACGATACTGCTCCAG
 ATCTCCACGCCCAGTGGCAAACCGGAATAATTCTCCAAGCAGAGAGCAGGAAGGAATATGAAGAGTGGA
 TATGTGCAGTAAACAACATCTCCAGGCAGATCTACCTGACGGACAACCCAGAGGCAGTAGCCATCAAGTT
 GAATCAGACGGCTCTTCAGGCGGTGACGCCAATTAACAAGCTTTGGGAAGAAAACAAGAAAGCTCCTGCTCC
 AGTCAAAACATAAAAAATTCAGACATAGAAGATGACAATATTGTTCCAAAAGCAACAGCCAGCATTCTCTG
 AAACAGAGGAAGTATTGCACCTGGGACACCCATTACAGTTTGATATTGTAATCCGGCAACAGAATTCCT
 TGACCAGAACAGGGGTGGCAGGCGCACCAACCTTTCGGTGAGACGGAGGATGGCTATTCCCTGAAGCA
 GAAGACTCTCTTCGACGAGATGTTTCATCGTTTCGGTTTTTGGGATCAATGGCAGTTAAGACAGACGCA
 CGGCTGAAGTGATTTATGAGGCAATGAGACAAGTACTGGCTGCTCGAGCTATTCACAACATCTTCCGCAT
 GACCGAATCCCATCTCATTGGTCAACAGTCAAACCTGAGGTTGATAGATCCTCAGACTCAAGTGTCAAGG
 GCCTGTTTTGAGCTTACCAGTGTACACAGTTTGTGCTCATCAAGAAAACAAAAGACTGGTTGGCTTTG
 TCATCCGGGTGCCGAGTCCACAGGAGAAGAGTCTCTGAGCACATACATTTTTGAAAGCAACTCAGAAGG
 AGAAAAGATATGCTATGCTATTAATTTGGGAAAGAAATATTGAGGTTCAAAGGATCCAGAAGCACTG
 GCTCGATTAATGCTGTGTACCACTAACCAATGATGGAAAGTATGTAATGTTAAACGATCAAGCAGATG
 AACTGGCGGAAGTCCAAGTGAACACAGAGGCGCAGAATCTGAAGCATAACTCATTGGGCATCGGGGT
 CAGAGCACGTGGGAAGGAGAGCCACTCCTTAAGCAGTTTTCAACTTCTCTGCCGTACAGGCACAGTGACC
 TGAATTTAGAACCACGACAATCAGTGGGAGTGTACCCTGGATGCCCTGGCACAGAACTTTGGGAGGG
 AGACAATAAGAAATGGGTGAGAGCGTGCCTACACTCTACAAATGCTATTTTAGGTGCTTTGTGGTAAAGT
 TTTGCTTCAGACTGTTGGGTACCAGAACGAGAGCTATAAAAAATGCATTGTTCACTTTATTTGGATAGCA
 GCGCTTCAGTTCCTAGGATCCTTTTATAAATGGTAAAACCTGGATTTACAATTTGTTAAATACTAAATA
 GTTCTATTAATATGATCTATTTTTGATTTTACTTAGTTTTAAGTGCCTGTCTTCTGAAGATTATATA
 TTTATAACCCAATGGTCTCATGCCTGGACCTCATGGCACTGCTATGCAATTTGGTCTCAACAGACAGCA
 AAGCCTTTACAACAGAACCTTTCTGAACCAGCTTTCATTCAAAAGCTTCAGGTCCTTTAGATGCTTTCT
 CTGGCTACTCACTGTGAGCAAGGACAGTCTACTAGTTCTGTTCTTCTGAGCCAGACCTTCTCAA
 GGGACCAATTAATTTAAACTCACTTGAAGCTCAGCTGGCTGTGGGCTGTCTTTGAAAGTTCTGGTTCT
 ACCTTGATGTTTCTGGTTCGTGGGTCCTGGACCAATCTCCAACCCCTAATTATGAAGTAAAGGTTCTTGA
 AATCATGCAGCATAAATTAATTGAACCATCTTCAACAACCTGTCTTTGTAATAATTTAGCAATAAAAAAC
 TGTTTCATCTCAAAAAAAAAAAAAAAAAAAAAA

Restriction Sites: RsrII-NotI
ACCN: NM_145220
Insert Size: 1989 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	BC048906 , AAH48906
RefSeq Size:	2903 bp
RefSeq ORF:	1989 bp
Locus ID:	216190
UniProt ID:	Q8K3G9
Cytogenetics:	10 C1

Gene 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]