

## Product datasheet for **MR227503**

### Dab2ip (NM\_001001602) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Dab2ip (NM\_001001602) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Dab2ip  
**Synonyms:** 2310011D08Rik; AI480459; Aip1; mKIAA1743  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MR227503 representing NM\_001001602  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGGCCTCTGTGGCCTTGGACTCCTCGGTGACAACCTTGGCAAGATCCTGTGCTGGTCTGGAGGTGCCA  
CTCTCTGGAGGCCAGCCATCCTCGGAAGCCTCATCTGGCTGCTGGGCCTCAGATGCCAGGTGAGGAGT  
GAGGCCTACACTCCTATCGTTGCCAAGTCCCATCTGATGCCAAGGCTGAAGGAGTCTCGGTACACGAG  
TCCTGCTCAGCCCAGCAGCGCAGTGGAGGCCCTGGACCTCAGCATGGAGGAGGAGGTGATTATCAAGC  
CCGTTACAGCAGCATCCTGGGTGAGGACTACTGCTTCGAGGTGACAACATCATCAGGAAGCAAGTGTTT  
TTCTGCGCGTACGCGCTGAGCGCGATAAGTGGATGGAGAACCTGAGGCGAGCAGTGCACCCCAACAAG  
GACAACAGCCGGCGTGTGGAGCATATCCTGAAGCTGTGGGTGATTGAGGCCAAGGATCTGCCGGCCAAGA  
AGAAGTATCTATGTGAAGTGTGCTGGACGATGTGCTGTATGCCCGTACCACAAGCAAGTCAAGACGGA  
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CCTCTGTGGCTGGGCGGCAGTTTGTGGAGAAGTGTACCCAGTGGTGACACCCCAAGGAGTGGCAA  
AGGCCCTGGGCCATGATCCGAATCAAGGACCGCTACCAGACCGTCAGCATCTTGCTATGGAGATGTAC  
AAGGAGTTTTCGAGCAGACATCACTAACCCTACCTGGGGCTGTGCGCAGCCCTGGAACCCATCCTCAGTG  
CCAAGACCAAGGAGGAGATGGCGTCCGCTCTGGTGCACATCCTGCAGAGCACGGAAAGTGAAGGACTT  
TCTAACAGACCTGATGATGTCAGAGGTGGACCGCTGTGGGGACAATGAGCACCTCATCTCCGGGAGAAC  
ACACTGGCCACCAAGGCCATCGAGGAATACCTCAAACCTTGTGGGCCAGAAGTACCTGCAGGACGCACTAG  
GTGAGTTCATCAAAGCTCTGTATGAGTCAGATGAAAATTGTGAAGTGGACCAAGCAAGTGTCTCATCCGC  
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TACTGCGTCTTCCACGGGAGCTTAAGGAGGTGTTGCGCTCATGGCGGCAGGAGTGTAGCAGCCGAGGCC  
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ACCCTCGCTCTTCAACCTGCTTCAGGAGTATCCTGACGACCGCACGGCTCGCACCCCTCACGCTCATTGCC  
AAAGTCAACCAGAACCTGGCCAACCTTGGCAAGTTTGGCAGCAAGGAAGAATACATGTCTTTCATGAACC



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AGTTCCTGGAGCAGAGTGGACCAACATGCAGCGCTTCTGTTGGAGATCTCAACCCCGAGACCCTTTC  
 CAACACAGCAGGCTTCGAGGGCTACATAGACCTGGGCCGGGAGCTCTCTAGCCTGCACTCCCTGCTCTGG  
 GAAGCTGTGAGCCAGCTTGTATCAGAGCGTTGTGTGCAAGCTGGGACCTCTGCCTCGTATCCTGAGGGATG  
 TCCACACAGCACTGAGCACTCCTGGCAGTGGGCAGCTCCCTGGCACCATGACCTGGCCTCCACCCCGGG  
 CTCCGGCAGCAGCAGCGTCTCTGCTGGGCTTCAAGAATGGTATTGAAAATGACCTCTCTGGTCTGATA  
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 GGAGACAGCCAGAGCTGAAGCCCCGAGCCATGCACAAGCAGGGCCCTTACCCGTGAGTCCCAATGCC  
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 TCCCCCCACAGGGATAGGCTAAGGAGTAAGGAGGAACTCAGCCAAGCAGAAAAGGATCTGGCAGTGCTA  
 CAAGACAAGCTACGGATCTCCACCAAGAAGCTGGAGGAGTATGAGACCCTATTCAAGTCCAGGAGGAGA  
 CGACGCAGAAGCTGGTGTGGAGTATCAGGCTCGGCTGGAAGAAGGTGAGGAGCGGCTGCGGCCGAGCA  
 GGAAGACAAGGATATCCAGATGAAAGGCATCATCAGCAGGTTGATGTCAGTGAAGAAGTAAAGAAAG  
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ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR227503 representing NM\_001001602  
 Red=Cloning site Green=Tags(s)

MGLCGLGLLDNLDLWVIEAKDLPKPKKYLCELCLDDVLYARTTSLKKTDNVFWGEHFEFHNLPPLRTVTVHL  
 YRETDKTKKERNYSYGLVSLPAAASVAGRQFVEKWYPVTPNPKGGKGGPMPMIRIKARYQTVSILPMEY  
 KEFAEHITNHYLGLCAALEPILSAKTKEMASLVHILQSTGKVKDFLTDLMMSEVDRCGDNEHLIFREN  
 TLATKAIEEYLKLVGQKYLQDALGEF IKALYESDENCEVDPSKCSSADLPEHQGNLKMCCELAFCKIINS  
 YCVFRELKEVFASWRQECSSRGRPDISERLISASLFLRFLCPAIMPSPSLFNLLQEYPPDRARTLTLIA  
 KVTQNLANFAKFGSKEEYMSFMNQFLEHEWTNMQRFLLEISNPETLSNTAGFEGYIDLGRELSSLHLLW  
 EAVSQLDQSVVSKLGPLPRILRDVHTALSTPGSGQLPGTNDLASTPGSGSSVSAGLQKMIENDLSGLI  
 DFTRLPSPTPENKDLFFVTRSSGVQPSPARSSSYSEANEPDLQMANGSKSLSMVDLQDARTLDGEAGSPV  
 GPDALPADGQVPATQLLAGWPARAAPVSLAGLATVRRVPTPTTPGTSEGAPGRPQLLAPLSFQNPVYQM  
 AAGLPLSPRGLDGSSEGHSSLSHSNSEELAAAALGFSFSTAAEELARRPGELARRQMSLTEKGGQPTV  
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 GDSPELKPRAMHKQGPSVSPNALDRTAAWLLTMNAQLLEDEGLGPDPPHRDRLRSEELSQAEKDLAVL  
 QDKLRISTKKLEEYETLFCQEETTQKLVLEYQARLEEGEERLRQQEDKDIQMKGIISRLMSVEEELKK  
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 SSNC

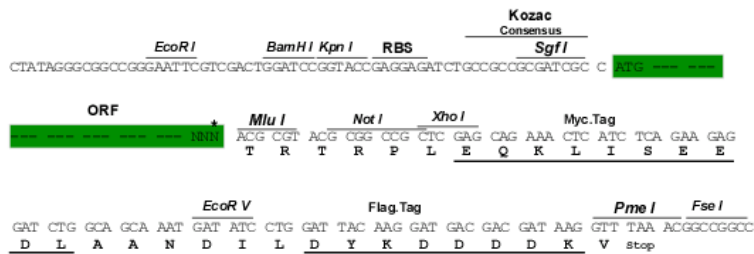
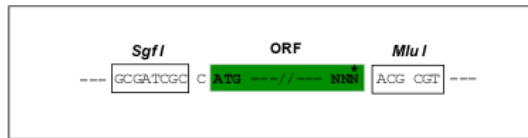
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

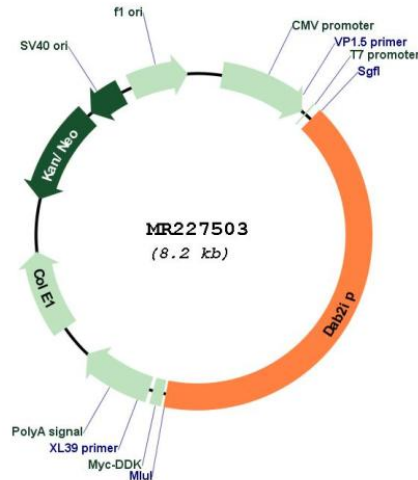
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001001602

**ORF Size:** 3372 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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:**

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:** [NM\\_001001602.2](#), [NP\\_001001602.2](#)

**RefSeq Size:** 6424 bp

**RefSeq ORF:** 3375 bp

**Locus ID:** 69601

**UniProt ID:** [Q3UHC7](#)

**Cytogenetics:** 2 B

**MW:** 124.4 kDa

**Gene Summary:** Functions as a scaffold protein implicated in the regulation of a large spectrum of both general and specialized signaling pathways. Involved in several processes such as innate immune response, inflammation and cell growth inhibition, apoptosis, cell survival, angiogenesis, cell migration and maturation. Plays also a role in cell cycle checkpoint control; reduces G1 phase cyclin levels resulting in G0/G1 cell cycle arrest. Mediates signal transduction by receptor-mediated inflammatory signals, such as the tumor necrosis factor (TNF), interferon (IFN) or lipopolysaccharide (LPS). Modulates the balance between phosphatidylinositol 3-kinase (PI3K)-AKT-mediated cell survival and apoptosis stimulated kinase (MAP3K5)-JNK signaling pathways; sequesters both AKT1 and MAP3K5 and counterbalances the activity of each kinase by modulating their phosphorylation status in response to proinflammatory stimuli. Acts as a regulator of the endoplasmic reticulum (ER) unfolded protein response (UPR) pathway; specifically involved in transduction of the ER stress-response to the JNK cascade through ERN1. Mediates TNF-alpha-induced apoptosis activation by facilitating dissociation of inhibitor 14-3-3 from MAP3K5; recruits the PP2A phosphatase complex which dephosphorylates MAP3K5 on 'Ser-966', leading to the dissociation of 13-3-3 proteins and activation of the MAP3K5-JNK signaling pathway in endothelial cells. Mediates also TNF/TRAF2-induced MAP3K5-JNK activation, while it inhibits CHUK-NF-kappa-B signaling. Acts a negative regulator in the IFN-gamma-mediated JAK-STAT signaling cascade by inhibiting smooth muscle cell (VSMCs) proliferation and intimal expansion, and thus, prevents graft arteriosclerosis (GA). Acts as a GTPase-activating protein (GAP) for the ADP ribosylation factor 6 (ARF6) and Ras. Promotes hydrolysis of the ARF6-bound GTP and thus, negatively regulates phosphatidylinositol 4,5-bisphosphate (PIP2)-dependent TLR4-TIRAP-MyD88 and NF-kappa-B signaling pathways in endothelial cells in response to lipopolysaccharides (LPS). Binds specifically to phosphatidylinositol 4-phosphate (PtdIns4P) and phosphatidylinositol 3-phosphate (PtdIns3P). In response to vascular endothelial growth factor (VEGFA), acts as a negative regulator of the VEGFR2-PI3K-mediated angiogenic signaling pathway by inhibiting endothelial cell migration and tube formation. In the developing brain, promotes both the transition from the multipolar to the bipolar stage and the radial migration of cortical neurons from the ventricular zone toward the superficial layer of the neocortex in a glial-dependent locomotion process. Probable downstream effector of the Reelin signaling pathway; promotes Purkinje cell (PC) dendrites development and formation of cerebellar synapses. Functions also as a tumor suppressor protein in prostate cancer progression; prevents cell proliferation and epithelial-to-mesenchymal transition (EMT) through activation of the glycogen synthase kinase-3 beta (GSK3B)-induced beta-catenin and inhibition of PI3K-AKT and Ras-MAPK survival downstream signaling cascades, respectively.[UniProtKB/Swiss-Prot Function]