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Product datasheet for SC107754

AAK1 (BC002695) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	AAK1 (BC002695) Human Untagged Clone
Tag:	Tag Free
Symbol:	AAK1
Synonyms:	adaptor-associated kinase 1; AP2 associated kinase 1; DKFZp686F03202; DKFZp686K16132; FLJ23712; FLJ25931; FLJ31060; FLJ42882; FLJ45252; KIAA1048; MGC138170; MGC164568; MGC164570
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene ORF within SC107754 sequence for BC002695 edited (data generated by NextGen Sequencing)

ATGAAGAAGTTTTTCGACTCCCGGCGAGAGCAGGGCGGCTCTGGCCTGGGCTCCGGCTCC
AGCGGAGGAGGGGGCAGCACCTCGGGCCTGGGCAGTGGCTACATCGGAAGAGTCTTCGGC
ATCGGGCGACAGCAGGTCACAGTGGACGAGGTGTTGGCGGAAGGTGGATTTGCTATTGTA
TTTCTGGTGAGGACAAGCAATGGGATGAAATGTGCCTTGAAACGCATGTTTGTCAACAAT
GAGCATGATCTCCAGGTGTGCAAGAGAGAAATCCAGATAATGAGGGATCTTTCAGGGCAC
AAGAATATTGTGGGTTACATTGATTCTAGTATCAACAACGTGAGTAGCGGTGATGTATGG
GAAGTGCTCATTCTGATGGACTTTTGTAGAGGTGGCCAGGTGGTAAACCTGATGAACCAG
CGCCTGCAAACAGGCTTTACAGAGAATGAAGTGCTCCAGATATTTTGTGATACCTGTGAA
GCTGTTGCCCGCCTGCATCAGTGCAAAACTCCTATTATCCACCGGGACCTGAAGGTTGAA
AACATCCTCTTGCATGACCGAGGCCACTATGTCCTGTGTGACTTTGGAAGCGCCACCAAC
AAATTCCAGAATCCACAAACTGAGGGAGTCAATGCAGTAGAAGATGAGATTAAGAAATAC
ACAACGCTGTCCTATCGAGCACCAGAAATGGTCAACCTGTACAGTGGCAAAATCATCACT
ACGAAGGCAGACATTTGGGCTCTTGGATGTTTGTTGTATAAATTATGCTACTTCACTTTG
CCATTTGGGGAAAGTCAGGTGGCAATTTGTGATGGAAACTTCACAATTCCTGATAATTCT
CGATATTCTCAAGACATGCACTGCCTAATTAGGTATATGTTGGAACCAGACCCTGACAAA
AGGCCGGATATTTACCAGGTGTCCTACTTCTCATTTAAGCTACTCAAGAAAGAGTGCCCA
ATTCCAAATGTACAGAACTCTCCCATTCCTGCAAAGCTTCCTGAACCAGTGAAAGCCAGT
GAGGCAGCTGCAAAAAAGACCCAGCCAAAGGCCAGACTGACAGATCCCATTCCCACCACA
GAGACTTCAATTGCACCCCGCCAGAGGCCTAAAGCTGGGCAGACTCAGCCGAACCCAGGA
ATCCTTCCCATCCAGCCAGCGCTGACACCCCGGAAGAGGGCCACTGTTCAGCCCCCACCT
CAGGCTGCAGGATCCAGCAATCAGCCTGGCCTTTTAGCCAGTGTTCCCCAACCAAAACCC
CAAGCCCCMCCCAGCCAGCCTCTGCCGCAAACTCAGGCCAAGCAGCCACAGGCTCCTCCC
ACTCCACAGCAGACGCCTTCTACTCAGGCCCAGGGTCTGCCCGCTCAGGCCCAGGCCACA
CCCCAGCACCAGCAGCATACAATAAAACTTAGTATGAAACTTTAA

Clone variation with respect to BC002695.2
1269 a=>m

5' Read Nucleotide Sequence:

>OriGene 5' read for BC002695 unedited

NGGGGAGGACTTTCGTGGAATTNTGTNAACCCGTATTTCACTGANAGGGNNCGGCCGCGN
AATTCGGCACGAGGGAAACCATCGGTATTTTGCTTTGCTGCTCCCTATTCGCAAGATGAA
GAAGTTTTTCGACTCCCGGCGAGAGCAGGGCGGCTCTGGCCTGGGCTCCGGCTCCAGCGG
AGGAGGGGGCAGCACCTCGGGCCTGGGCAGTGGCTACATCGGAAGAGTCTTCGGCATCGG
GCGACAGCAGGTCACAGTGGACGAGGTGTTGGCGGAAGGTGGATTTGCTATTGTATTTCT
GGTGAGGACAAGCAATGGGATGAAATGTGCCTTGAAACGCATGTTTGTCAACAATGAGCA
TGATCTCCAGGTGTGCAAGAGAGAAATCCAGATAATGAGGGATCTTTCAGGGCACAAGAA
TATTGTGGGTTACATTGATTCTAGTATCAACAACGTGAGTAGCGGTGATGTATGGGAAGT
GCTCATTCTGATGGACTTTTGTAGAGGTGGCCAGGTGGTAAACCTGATGAACCAGCGCCT
GCAAACAGGCTTTACAGAGAATGAAGTGCTCCAGATATTTTGTGATACCTGTGAAGCTGT
TGCCCGCCTGCATCAGTGCAAAACTCCTATTATCCACCGGGACCTGAAGGTTGAAAACAT
CCTCTTGCATGACCGAGGCCACTATGTCCTGTGTGACTTTGGAAGCGCCACCAACAAATT
CCAGAATCCACANAACTGAGGAGTCAATGCAGTAGAAGATGAGATTAAGAAATACACAAC
GCTGTCCTATCGAGCACCAGAAATGGTCAACCTGTACAGTGGCAAAATCATCACTACGAA
AGCAGACATTTGGGCTCTTGGAATNNNTTGTGTATAAAATATGCTACTTCACTTTGCCAT
TTGGGGAAAGTCAGGTGGCN

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3' Read Nucleotide Sequence:

>OriGene 3' read for BC002695 unedited
GTATACTAGGACCGCGCCCAATCTANATCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TAAAAGTTTCAAACAAATTTTTATTGTACCCCCCGGGGGCCGGGGGGGGGCCGGGGCCCG
AACGGGCAAACCCGGGGCCCGAAAAAAAAGCCCCCCCCGGGGAGGGGGAAAACCCCGGGG
CCCCTTGGCCCGATTTTGCGCCAAAAGCCGGCGGGGGGGGGCCTGGGGTTTTGGTTGGGA
AACACCGGCAAAAAGGCCCGCCTGATTGCGGGACCCCGCCCCCCGGGGGGGGGGCCAAAC
AGGGGCCCCCTTCCGGGGGGTCACCCCCGGCTGGAAGGAAAAGAACCCCGGGTTCCGCCG
AATCCCCCCAACTTTAGCCCCCGGGGGGGGGGCAATTGAAACCCCCGGGGGGGGAAAGGG
ATCCGGCAACCCGGCCTTTGGGGGGGTCTTTTTTGCCCCCGCCCCACGGGCTTTCACGGG
TTAAAAAACCTTTGCAGGAAGGGGAAAATTCCGGCCCTTTGGAATTGGGCCCCCTTTCCT
GAGTACCCTAAAAGAAAAATAGGACCCCCGGAAAAAACCCCGCCTTTTGGCAGGGGCGGG
TTCCCACAAAAACCTAATTAAGCCGGGCATGTCTTGAAAAATACGAAAAATNCCCGGAAT
TGGGAAATTTCCACACAAAAGGCCCCCTGACTTTCCCCAAAGGGAAAGGGGAAGTCCCTA
ATTTATACAACAAACACCCAAAACCCCAAATGGCCGCCCTCCAAGGGAAGAATTTGCCCC
GGCACGGGGTGACCATTTCGGGGCCCCAAAAGAAACCCCTTGGGTATTTCCAAACCC

Restriction Sites: Please inquire

ACCN: BC002695

Insert Size: 1650 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:
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: BC002695.2, AAH02695.1

RefSeq Size: 1513 bp

RefSeq ORF: 1425 bp

Locus ID: 22848

Cytogenetics: 2p13.3

Protein Families: Druggable Genome, Protein Kinase

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Gene Summary: This gene encodes a member of the SNF1 subfamily of serine/threonine protein kinases. Adaptor-related protein complex 2 (AP-2 complexes) functions during receptor-mediated endocytosis to trigger clathrin assembly, interact with membrane-bound receptors, and recruit encodytic accessory factors. The encoded protein interacts with and phosphorylates a subunit of the AP-2 complex, which promotes binding of AP-2 to sorting signals found in membrane-bound receptors and subsequent receptor endocytosis. Its kinase activity is stimulated by clathrin. This kinase has been shown to play an important role in regulating the clathrin-mediated endocytosis of the rabies virus, facilitating infection. Inhibitors of this kinase are being studied as candidate therapeutics to disrupt the entry of viruses, including SARS-CoV-2, into target cells. It is also involved in positive regulation of Notch pathway signaling in mammals. Alternatively spliced transcript variants have been described, but their biological validity has not been determined. [provided by RefSeq, Aug 2020]

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