

## Product datasheet for **SC323545**

### 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:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for BC002695, the custom clone sequence may differ by one or more nucleotides

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ATGAAGAAGTTTTTCGACTCCCGGCGAGAGCAGGGCGGCTCTGGCCTGGGCTCCGGCTCCAGCGGAGGAG
GGGGCAGCACCTCGGGCCTGGGCAGTGGCTACATCGGAAGAGTCTTCGGCATCGGGCAGCAGAGGTAC
AGTGGACGAGGTGTTGGCGGAAGGTGGATTTGCTATTGTATTTCTGGTGAGGACAAGCAATGGGATGAAA
TGTGCCTTGAAACGCATGTTTGTCAACAATGAGCATGATCTCCAGGTGTGCAAGAGAGAAAATCCAGATAA
TGAGGGATCTTTTCAGGGCACAAGAATATTGTGGGTTACATTGATTCTAGTATCAACAACGTGAGTAGCGG
TGATGTATGGGAAGTGCTCATTCTGATGGACTTTGTAGAGGTGGCCAGGTGGTAAACCTGATGAACCAG
CGCCTGCAAAACAGGCTTTACAGAGAATGAAGTGTCCAGATATTTGTGATACCTGTGAAGCTGTTGCC
GCCTGCATCAGTGCAAACTCCTATTATCCACCGGACCTGAAGGTTGAAAACATCCTCTTGCATGACCG
AGGCCACTATGTCCTGTGTGACTTTGGAAGCGCCACCAACAAATCCAGAATCCACAACTGAGGGAGTC
AATGCAGTAGAAGATGAGATTAAGAAATACACAACGCTGTCTATCGAGCACCAGAAATGGTCAACCTGT
ACAGTGGCAAAATCATCACTACGAAGGCAGACATTTGGGCTCTGGATGTTTGTGTATAAATTATGCTA
CTTCACTTTGCCATTTGGGGAAAGTCAGGTGGCAATTTGTGATGAAAACCTCACAATTCCTGATAATTCT
CGATATTTCTCAAGACATGCACTGCCTAATTAGGTATATGTTGGAACCAGACCCTGACAAAAGGCCGGATA
TTTACCAGGTGTCCTACTTCTCATTAAAGTACTCAAGAAAGAGTGCCCAATTCCAAATGTACAGAACTC
TCCCATTCCTGCAAAAGCTTCTGAACAGTGAAGCCAGTGAGGCAGCTGCAAAAAGACCCAGCCAAAAG
GCCAGACTGACAGATCCCATTCCACCACAGAGACTTCAATTGCACCCCGCCAGAGGCCTAAAGCTGGGC
AGACTCAGCCGAACCCAGGAATCCTTCCATCCAGCCAGCGCTGACACCCCGGAAGAGGGCCACTGTTCA
GCCCCACCTCAGGCTCAGGATCCAGCAATCAGCCTGGCCTTTTAGCCAGTGTCCCAACCAAAAACCC
CAAGCCCAACCCAGCCAGCCTCTGCCGAAACTCAGGCCAAGCAGCCACAGGCTCCTCCACTCCACAGC
AGACGCTTCTACTCAGGCCAGGCTCTGCCGCTCAGGCCAGGCCACACCCAGCACCAGCAGCATAAC
AATAAACTTAGTATGAACTTTAA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for mutant BC002695 unedited

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CCGCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTGTGAAAC
CGTCAAGATCTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGGCAGGAGAAACCATCGGTATTT
TGCTTTGTGCTCCCTATTTCGCAAGATGAAGAAGCTTTTCGACTCCCGGCGAGAGCAGGGCGGCTCTGGC
CTGGGCTCCGGCTCCAGCGGAGGAGGGGCGAGCACCTCGGGCCTGGGCAAGTGGCTACATCGGAAGAGTCT
TCGGCATCGGGCGACAGCAGGGTCACAGTGGACGAGGGTGTGGCGGGAAGTGGATTTGCTATTTGTATT
TTCTGGGTGAGGGACAAGCCAATGGGATGAAAATGTGGCCTTGATAGCCCGCTAGTGTGTTGTCCAACAAT
GGAGCACATGGATTCTCCAGTGTGTGCAAGAGAGAGAAATCTCAGGATATAGAGAGGATCCCTTTCA
GGGGCACCAAGAAATTTGGGTGGGTACACATGAGATCTCTAGTAAAAAACACCTTGAATGGCGGTGATT
ATAGGGAGAATGTGCTTATTCGTTATGGCCTTTGTAGGGGGTGGCCAGGTGGTAAACCTGATGAACCC
CGCCCTGGAAAACGCGCTTTCCAAAAAAGGAAGGGGCCAAAATTTTGGAAATCCGTGAAAACCTTTT
CCCCCCTCTCAGGCAATCCTCTTATTATCCCCGACCCGAGGTGGTAAAAATCCTTCTGTTGAAAA
AGGAGCGCCAAAAGCCCGGGGCAACGGAGAACCCCCCAAAATTCGAAAACCCACCTAGGGAGGCAT
TGCGGTCTAGAAAAGAGAAATAAAGAACAACGCGTGTCTCTATCGCACAAAAGTGTGCCCTCTGTGTGG
CGATATTTCTCAAGCGAGACATTTGCCGCTGAGATGTGTGTTGAATATACCGAGCACCTGCGCAATCGG
AACCATGGCGCAGTGGTTGGGAGCTACACTCTGCAGATATACATACTGAAGCAGCTCGGCTCTATGATG
T
    
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**Kinase Domain Sequence:**

>SC323545 kinase domain raw sequence. By performing [BLASTX](#) analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation

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CRKTRAGTGTGGCGGAGGTGGATTTGCTATTGTATTTCTGGTGAGGACAAGCAATGGGATGAAATGTGC
CTTGATGCGCATGTTTGTCAACAATGAGCATGATCTCCAGGTGTGCAAGAGAGAAAATCCAGATAATGAGG
GATCTTTTCAGGGCACAAGAATATTGTGGGTTACATTGATTCTAGTATCAACAACGTGAGTAGCGGTGATG
TATGGGAAGTGCTCATTCTGATGGACTTTGTAGAGGTGGCCAGG
    
```

<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	BC002695
<b>Insert Size:</b>	1650 bp
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." <a href="#">Cell. 2008 May p536-548.</a>
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">BC002695.2</a> , <a href="#">AAH02695.1</a>
<b>RefSeq Size:</b>	1513 bp
<b>RefSeq ORF:</b>	1425 bp
<b>Locus ID:</b>	22848
<b>Cytogenetics:</b>	2p13.3
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Gene Summary:</b>	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]