

## Product datasheet for **RG223572**

### GAK (NM\_005255) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GAK (NM_005255) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GAK
Synonyms:	DNAJ26; DNAJC26
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG223572 representing NM_005255 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCGCTGCTGCAGTCGGCGCTCGACTTCTTGGCGGGTCCAGGCTCCCTGGGCGGTGCTTCCGGCCGG  
ACCAGAGTGACTTCGTGGGCAGACGGTGAAC TGGGCGAGCTGCGGCTGCGGGTGC GGCGGGTCTCGC  
CGAAGGAGGGTTGCATTTGTGTATGAAGCTCAAGATGTGGGAGTGGCAGAGATATGCATTAAGAGG  
CTATTATCCAATGAAGAGGAAAAGAACAGAGCCATCATTCAAGAAAGTTTGCTTCATGAAAAAGCTTCCG  
GCCACCCGAACATTGTCCAGTTTGTTCGTCAGCGTCTATAGGAAAAGAGGAGTCAGACACGGGGCAGGC  
TGAGTTCCCTCTTGCTCACAGAGCTCTGTAAGGGCAGCTGGTGAATTTTGAAGAAAATGGAATCTCGA  
GGCCCCCTTTCGTGCGACACGGTCTGAAGATCTTCTACCAGACGTGCCGCGCCGTGCAGCACATGCACC  
GGCAGAAGCCGCCATCATCCACAGGGACCTCAAGGTTGAGAAGTGTGCTTAGTAACCAAGGGACCAT  
TAAGCTGTGTGACTTTGGCAGTGCCACGACCATCTCGCACTACCTGACTACAGCTGGAGCGCCAGAGG  
CGAGCCCTGGTGGAGGAAGAGATCACGAGGAATACAACACCAATGTATAGAACACCAGAAATCATAGACT  
TGATTCCAACCTCCCGATCGGCGAGAAGCAGGATATCTGGGCCCTGGGCTGCATCTTGTACCTGCTGTG  
CTTCCGGCAGCACCCCTTTGAGGATGGAGCGAACTTCGAATAGTCAATGGGAAGTACTCGATCCCCCG  
CACGACACGCAGTACACGGTCTTCCACAGCCTCATCCGCGCCATGCTGCAGGTGAACCCGGAGGAGCGCG  
TGTCATCGCCGAGGTGGTGCACCAGCTGCAGGAGATCGCGGCCGCCCGCAACGTGAACCCCAAGTCTCC  
CATCACAGAGCTCCTGGAGCAGAATGGAGGCTACGGGAGCGCCACACTGTCCCGAGGGCCACCCCTCCC  
GTGGGCCCGCTGGCAGTGGCTACAGTGGAGGCTGGCGCTGGCGGAGTACGACCAGCCGTATGGCGGCT  
TCCTGGACATTCTGCGGGTGGGACAGAGCGGCTCTTACCAACCTCAAGGACACCTCCTCCAAGGTCAT  
CCAGTCTGTCGCTAATTATGCAAAGGGTGACCTGGACATATCTTACATCACATCCAGAATTGCAGTGATG  
TCATTCCAGCAGAAGGTGTGGAGTCAGCGCTCAAAAACAACATCGAAGATGTGCGGTTGTTCTGGACT  
CCAAGCACCCAGGCACTATGCCGTCTACAACCTGTCCCCGAGGACCTACCGCCCTCCAGTTCCACAA  
CCGGGTCTCCGAGTGTGGCTGGGACGACGGCGGCCACACCTGCACACCCTGTACAACATCTGCAGG



AACATGCACGCCTGGCTGCGGCAGGACCACAAGAACGTCTGCGTCGTGCACTGCATGGACGGGAGAGCCG  
 CGTCTGCTGTGGCCGTCTGCTCCTTCTGTGCTTCTGCCGTCTTTCAGCACCCGCGGAGGCCGCCGTGTA  
 CATGTTACAGATGAAGCGCTGCCACCAGGCATCTGGCCATCCCACAAAAGGTACATCGAGTACATGTGT  
 GACATGGTGGCGGAGGAGCCCATCACACCCACAGCAAGCCATCCTGGTGAGGGCCGTGGTCATGACAC  
 CCGTGCCGCTGTTACGAAGCAGAGGAGCGGCTGCAGGCCCTTCTGCGAGGTCTACGTGGGGGACGAGCG  
 TGTGGCCAGCACCTCCCAGGAGTACGACAAGATGCGGGACTTAAAGATTGAAGATGGCAAAGCGGTGATT  
 CCCCTGGGCGTACGGTGAAGGAGAGCGTGCATCGTATCTATCACGCCCGGTCCACTCTGGGCGGCC  
 GGCTGCAGGCCAAGATGGCATCCATGAAGATGTTCCAGATTAGTTCCACACGGGGTTTGTGCTCGGAA  
 CGCCACCCTGTGAAATTTGCCAAGTATGACCTGGACGCGTGTGACATTCAAGAAAAATACCCGGATTTA  
 TTTCAAGTGAACCTGGAAGTGGAGTGGAGCCAGGGACAGGCCGAGCCGGGAAGCCCAACCATGGGAGA  
 ACTCGAGCATGAGGGGGCTGAACCCAAAATCCTGTTTTCCAGCCGGGAGGAGCAGCAAGACATTCTGTC  
 TAAGTTTGGGAAGCCGGAGCTTCCCGGCAGCCTGGCTCCACGGCTCAGTATGATGCTGGGGCAGGGTCC  
 CCGGAAGCCGAACCCACAGACTCTGACTCACGCCAAGCAGCAGCGGGACGCCAGTCTGCTTCTGCACA  
 CGCTGGACTGGCAGGAAGAGAAGGAGGCAGAGACTGGTGCAGAAAATGCCTCTTCCAAGGAGAGCGAGTC  
 TGCCCTGATGGAGGACAGAGACGAGAGTGGTGTGATGAAGGGGGATCCCCGATCTCCAGCGAGGGC  
 CAGGAACCCAGGGCCGACCCAGAGCCCCCGGCCCTGGCAGCAGGGCTGGTGCAGCAGGACTTGGTTTTTG  
 AGGTGGAGACACCGGCTGTGCTGCCAGAGCCTGTGCCACAGGAAGACGGGGTTCGACCTCCTGGGCTGCA  
 CTCCGAGGTGGGCGCAGGGCCAGCTGTACCCCCGAGGCCCTGCAAGGCCCCCTCCAGCAACCCGACCTG  
 CTCAGTGCCTCCTTGGGCCCTTGAGGCCCTCCCAGGGGCCCGGAGGATCTGCTCAGCGAGGACC  
 CGCTGCTCCTGGCAAGCCCGGCCCTCCCTGAGCGTGCAGAGCACCCCAAGAGGAGGGCCCCCTGCCGC  
 TGGCAACAACCTCCAGCCCTGCTCCAATCCTGATCTTTCGGCGAATTTCTCAATTCGGACTCTGTGACC  
 GTCCCACCATCCTTCCCGTCTGCCACAGCGCTCCGCCCATCCTGCAGCGCCGACTTCTGCACCTGG  
 GGGATCTGCCAGGAGAGCCAGCAAGATGACAGCCTCGTCCAGCAACCCAGACCTGCTGGGAGGATGGGC  
 TGCTTGACCGAGACTGCAGCGTCGGCAGTGGCCCCACGCCAGCCACAGAAGGCCCTTCTCTCCT  
 GGAGGTACGCCGCCCTTGTGGCTCTCAGGCCAGCTGGACCAAGTCTCAGAACC CGGACCCATTGCTG  
 ACCTTGCGCAGCTCAGCTCCGGCCTCAAGGCTCACCAGCTGGATTCCCTCCTGGGGCTTCATTCCCAA  
 AACGGCCACCACGCCAAAGGCAGCAGCTCCTGGCAGACAAGTCGGCCGCCAGCCAGGGCGCCTCATGG  
 CCCCCTCAGGCCAAGCCGCCCCCAAAGCCTGCACACAGCCAAGGCCTAACTATGCCTCGAACTTCAGTG  
 TGATCGGGGCGCGGAGGAGCGGGGGTCCGCGCACCCAGCTTTGCTCAAAGCCAAAAGTCTCTGAGAA  
 CGACTTTGAAGATCTGTTGTCCAATCAAGGCTTCTCCTCAGGTCTGACAAGAAAGGCCAAAGACCATT  
 GCAGAGATGAGGAAGCAGGACCTGGCTAAAGACACGGACCCACTCAAGCTGAAGCTCCTGGACTGGATTG  
 AGGGCAAGGAGCGGAACATCCGGGCCCTGCTGTCCACGCTGCACACAGTGTGTGGGACGGGAGAGCCG  
 CTGGACGCCCGTGGGCATGGCCGACCTGGTGGCTCCGGAGCAAGTGAAGAAGCACTATCGCCGCGGGTG  
 CTGGCCGTGCACCCGACAAGGCTGCGGGGACCGGTACGAGCAGCAGCCAAAGATGATCTTCATGGAGC  
 TGAATGACGCCTGGTCGGAGTTTGAAGAACCAGGGCTCCCGGCCCTCTTC

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG223572 representing NM\_005255  
 Red=Cloning site Green=Tags(s)

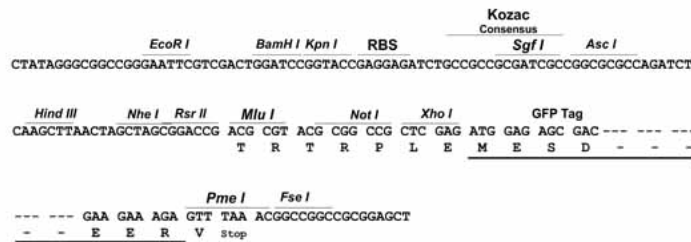
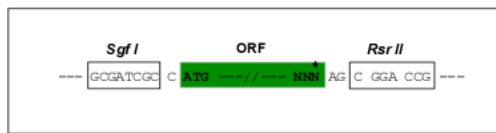
```
MSLLQSALDFLAGPGLGGASGRDQSDVFGQTVELGELRLVRRVLAEGGFVVEAQQDVGSGREYALKR
LLSNEEEKNRAIIQEVCFMKKLSGHPNIVQFCSAASIGKEESDTGQAEFLLLTELCKGQLVEFLKMESE
GPLSCDTVLKIFYQTCRAVQHMHRQKPPIIHRDLKVENLLLSNQGTIKLCDFGSATTISHYPDYSWAQR
RALVEEEITRNTTPMYRTPEIIDLYSNFPIGEKQDIWALGCILYLLCFRQHPFEDGAKLRIVNGKYSIPP
HDTQYTVFHSLIRAMLQVNPEERLSIAEVVHQLQEIAAARNVNPKSPITELLEQNGGYGSATLSRGPPPP
VGPAGSGYSGGLALAEYDQPYGGFLDILRGGTERLFTNLKDTSSKVIQSVANYAKGDLDISYITSRIAVM
SFPAGVESALKNNIEDVRLFLDSKHPGHYAVYNLSPRTYRPSRFHNRVSECGWAARRAPHLHTLYNICR
NMHAWLRQDHKNVCVHCMDGRAASAVAVCSFLCFRLFSTAEAAVYMFMSMKRCPPIGWPSHKRYIEYMC
DMVAEEPITPHSKPILVRAVMTVPVPLFSKQSRGCRPFCEVYVGDERVASTSQEYDKMRDFKIEDGKAVI
PLGVTVQGDVLIIVYHARSTLGGRLQAKMASMKMFQIQFHTGFVPRNATTVKFAKYDLDACDIQEKYPDL
FQVNLVEVEPRDRPSREAPPWENSSMRGLNPKILFSSREEQQDILSKFGKPELPRQPGSTAQYDAGAGS
PEAEPTDSDSPSSADSRFLHTLDWQEKEAETGAENASSKESESALMEDRDESEVSDEGGSPISSEG
QEPRADPEPPGLAAGLVQQDLVFEVETPAVLPEPVPQEDGVDLLGLHSEVGAGPAPPQACKAPSNTDL
LSCLLGPPEAASQGPEDLLSEDPLLLASPAPPLSVQSTPRGGPPAAGNNSQPCSNPDLFGFELNDSVT
VPPSFPASHSAPPPSCSADFLHLGDLPGEPSKMTASSSNPDLGGAAWTETAASAVAPTATEGPLFSP
GGQPAPCGSQASWTKSQNPDPFADLGDLSGLQGSPAGFPFPGGFIPKATATPKGSSSWQTSRPPAQGASW
PPQAKPPPACTQPRPNYASNFVIGAREERGVRAPSFAQKPKVSEND FEDLLSNQGFSSRSDDKKGPKTI
AEMRKQDLAKDTPDKLKLDDWIEGKERNIRALLSTLHTVLWDGESRWTPVGMADLVAPEQVKKHYRRV
LAVHPDKAAGQPYEQHAKMIFMELNDAWSEFENQGSRPLF
```

SGPTRRRLE - GFP Tag - V

**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

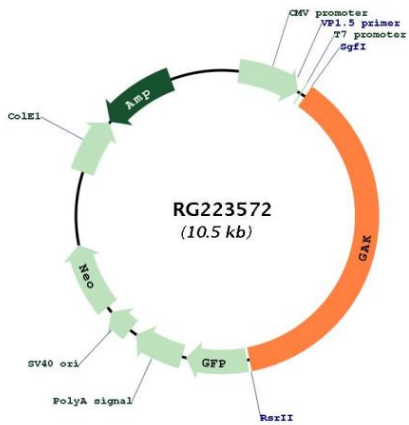


**ACCN:** NM\_005255

**ORF Size:** 3900 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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="#">NM_005255.1</a> , <a href="#">NP_005246.1</a>
<b>RefSeq Size:</b>	4331 bp
<b>RefSeq ORF:</b>	3936 bp
<b>Locus ID:</b>	2580
<b>UniProt ID:</b>	<a href="#">O14976</a>
<b>Cytogenetics:</b>	4p16.3
<b>Domains:</b>	pkinase, TyrKc, Dnal, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Gene Summary:</b>	In all eukaryotes, the cell cycle is governed by cyclin-dependent protein kinases (CDKs), whose activities are regulated by cyclins and CDK inhibitors in a diverse array of mechanisms that involve the control of phosphorylation and dephosphorylation of Ser, Thr or Tyr residues. Cyclins are molecules that possess a consensus domain called the 'cyclin box.' In mammalian cells, 9 cyclin species have been identified, and they are referred to as cyclins A through I. Cyclin G is a direct transcriptional target of the p53 tumor suppressor gene product and thus functions downstream of p53. GAK is an association partner of cyclin G and CDK5. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Dec 2015]

Product images:



Circular map for RG223572