

Product datasheet for **RG226355**

PLEKHG4 (NM_001129729) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: PLEKHG4 (NM_001129729) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: PLEKHG4
Synonyms: ARHGEF44; PRTPHN1; SCA4
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG226355 representing NM_001129729
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGGCCCTGGAGAATGGGGATGAGTCCCCAGACTCTCAGGGCCATGCCACCGACTGGAGATTTG
CTGTGTGCAGTTTCAGGGATGCCTGGGAAGAGGAGGAACCTGCTTCCCAGATGCACGTTAAGGACCCAGG
TCCTCCAAGACCACCAGCCGGGGCCACCCAGGATGAGGAGCTACAGGGCAGCCCCCTGTCCAGGAAATTC
CAGTTACCCCACTGCAGATGAGTCGGGGATGCCAGAGGGGCACAGTAGAAAGCTCCTCAGTCTGT
CAGAAGGGCCAGGCCCTCTGGAGTGGAGAGTCTCCTATGCCCATGTCTCCACCTCAGCTTGGCACA
GGGTGAGAGTGACACCCAGGGTAGGGTTGGTAGGGGACCCAGGTCCAAGCAGGGCGATGCCATCTGGC
TTGAGCCCTGGGCATTGGACAGCGACCCTGTGGGCTTGGAGACCCCTTATCAGAAATATCAAAGCTGC
TGGAGGCAGCCCCAGTGGATCCGGCCTCCCTAAGCCTGCTGACTGCCTCCTGGCCCAAGACCTCTGTTG
GGAGCTGCTGGCCAGTGGTATGGCCACCTTGCCAGGGACTCGGGATGTCCAAGGCCGGGCAGTGTGCTT
CTGTGTGCCACAGCCAGCCTGGCTTCACTGAGTGCAGCAGCCAGGAACTCATCCGCCCTCCTGCTGT
ACCTGCGAAGCATCCCCAGGCCGAAGTACAGGCACTGGGACTGACAGTGTAGTTGATGCCCGAATTTG
TGCTCCAAGTTCTTCCCTCTTCTCTGGGCTCAGCCAACACAAGAAGCAGCCCCAGGGCCGTGTACCAG
GTGCTGCTAGTGGGAAGCAGCTGCTGAAGGAAGTGCCCTCCGGGCTGCAGCTGGAGCAGTTGCCCTTCTC
AGAGCCTGCTGACCCACATCCCAACGGCGGGCTGCCCACTTCGCTAGGAGGAGGCTGCCTTACTGCCA
CCAGGCCCTGGCTGGATTTCCGAAGCGGCTGGAAGCTCTACTACAGAAGTCCAGGCAGCTTGTGCCCTG
CTCCAGGGGGCCATCGAAAGTGTGAAGGCTGTGCCCCAGCCATGGAGCCTGGGAGGTCGGTCACTGCTG
TACAGCAGACAGAGGTCCTGATGCAGCAGGTGCTAGACTCGCCATGGCTGGCATGGCTACAATGCCAGGG
GGGCCGGGAGCTGACATGGCTGAAGCAAGAGGTCCAGAGGTGACCTGAGCCAGACTACAGGACGGCA
ATGGACAAGGCTGACGAGCTATATGACCGGTGGATGGATTGCTGCACCAACTGACCTGCAGAGCAACC
AGCGAATACAGGCCCTAGAGTTGGTCCAAACACTGGAGGCCCGGAAAGCGGACTGCACCAGATTGAAGT
GTGGCTGCAGCAGGTGGCTGGCCAGCACTGGAGGAGGCTGGGGAGCCCTCGCTGGACATGCTGCTCCAG



[View online >](#)

GCCCAAGGCTCTTTTCAGGAGCTGTACCAGGTTGCCCAGGAGCAGGTGAGCAAGGGGAGAAGTTTCTGC
AGCCGCTGACTGGCTGGGAGGCGGCTGAACTGGACCCCTGGGGCAGCTTTCTGGCCCTGCGAGCCCA
GCTGACTGAATCTCTAGGGCTTTGGCCAGCGGTGCCAGCGGCTGGCGGATGCTGAGAGGCTGTTTCAG
CTCTTCAGGGAGGCTTGACGTGGGCTGAGGAGGGGCAGCGAGTGTGGCAGAGCTGGAGCAGGAACGCC
CGGGGTTGTGTTGCAGCAGCTGCAGCTGCACTGGACCAGGCACCCTGACTTGCCCTCTGCCACTTCCG
AAAGATGTGGGCTCTGGCCACGGGGCTGGGCTCAGAGGCCATCCGCCAGGAGTCCGCTGGGCTGGGCG
CGGTGCCAGGACACCTGGCTGGCCCTGGACCAAAGCTTGAGGCTTCACTGAAGCTACCACCGTGGGCA
GCACAGCTAGCCTGTGTGTGAGCCAGGTCGCCGCTGCACCTGCCACCCTCCCCTGAGGAAGGCCTACAG
CTTCGATCGGAATCTGGGGCAGAGTCTCAGTGAACCTGCCTGCCACTGCCACCATGCGGCCACTATTGCT
GCCTGCCGAGACCAGAGGCTGGAGGAGGTGCCCTGCCCCAGGCATCCCCTACTGTGCCTCCACCAGGCA
GCTCTGACCCAGGAGCCTCAACAGGCTACAGCTGGTGTGGCAGAGATGGTGGCCACGGAGCGGGAGTA
TGTCGGGCTCTAGAGTACACTATGGAGAACTATTTCCCGAGCTGGATCGCCCCGATGTGCCCCAGGGC
CTCCGCGTCAAGCTGCCACCTCTTTGGCAACCTGGAGAAGCTGCGGGACTTCCACTGCCACTTCTTCC
TGCGTGAGCTGGAGGCTGCACCCGGCACCCACAGAGTGGCCTATGCCTTCTGCGCCATAGGGTGCA
GTTTGGGATGTACGCGCTCTACAGCAAGAATAAGCCTCGTCCGATGCCCTGATGTCAAGCTATGGGCAC
ACCTTCTCAAGGACAAGCAGCAAGCACTGGGGGACCACCTGGACCTGGCCTCTACCTGTAAAGCCCA
TCCAGCGCATGGGCAAGTACGCACTGCTGCTGCAGGAGCTGGCACGGGCCTGCGGGGGCCCCACGAGGA
GCTCAGTGCCTGCGGGAGGCCAGAGCCTTGTGCACTTCCAGCTGCGGCACGGAAACGACCTGCTGGCC
ATGGACGCCATCCAGGGCTGTGATGTTAACCTCAAGGAACAGGGGAGCTGGTGCACAGGATGAGTTTG
TGGTGCAGCTGGGCGCCACAAGTCCGTGCGCCGATCTTCTTTTTGAGGAGCTGCTGCTTTCAGCAA
GCCTCGCCATGGGCCACAGGGGTTGACACATTTGCCTACAAGCGCTCCTTCAAGATGGCAGACCTTGGT
CTCACTGAGTGTGTGGAAACAGCAACCTGCGCTTCGAGATCTGGTTCGCCCGCCGAAGGCCAGGGACA
CCTTTGTGCTGCAGGCCCTCCAGCCTGGCTATCAAGCAGGCTGGACAGCTGACATCTCCACCTGCTTTG
GAGGCAGGCCGTCCACAACAAGGAGGTGCGCATGGCTGAGATGGTGTCCATGGGTGTGGGAAACAAGGCC
TTCGAGACATTGCTCCAGCGAGGAAGCCATCAACGACCGCACCGTCAACTATGTCCTGAAGTGCCGAG
AAGTTCGCTCTCGGGCGTCCATTGCCGTAGCCCGTTTGACCATGACAGCCTCTACCTGGGGCCTCGAA
CTCCCTTCTGGAGACCCTGCCTCTTGCTGTCTGTTCTGGGGTCCCTCAACCTGCACCTGTACAGAGACCCA
GCTCTTCTGGGTCTCCGCTGTCCCTGTATCCAGCTTCCAGAGGAAGCAGCACTGGAGGCTGAGGCAG
AGCTGGGCGGCCAGCCCTCTTTGACTGCTGAGGACTCAGAGATCTCGTCCCAATGCCCATCAGCCAGTGG
CTCCAGTGGCTCTGACAGCAGCTGTGTGTGAGGGCAGGCCCTGGGTAGGGGCTGGAGGACTTACCCTGT
GTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG226355 representing NM_001129729
 Red=Cloning site Green=Tags(s)

```
MERPLENGDESPDSQGHATDWRFAVCSFRDAWEEEEEPASQMHVKDPGPPRPPAGATQDEELQGSPLSRKF
QLPPAADESGDAQRTVESSSVLSEGPGPSGVESELLCPMSSHLSLAQGESDTPGVGLVGDPPSRAMPSG
LSPGALSDPVGLDPLSEISKLEAAPSGSGLPKPADCLLAQDLCWELLASGMATLPGTRDVGRAVLL
LCAHSPAWLQSECSSQELIRLLLYLRSIPRPEVQALGLTVLVDARICAPSSSLFSGLSQLQEAPGAVYQ
VLLVSTLLKEVPSGLQLEQLPSQSLTHIPTAGLPTSLGGGLPYCHQAWLDFRRRLEALLQNCQAACAL
LQGAIESVKAVPQMPPEGEVQQLLQQTEVLMQQVLDSPWLAWLQCQGGRELTLWKQEVPEVTLSPDYRTA
MDKADEL YDRVDGLLHQLTLQSNQRIQALELVQTL EARESGLHQIEVWLQQVGPAL EEEAGEPSLMDLLQ
AQGSFQEL YQVAQE QVRQGEKFLQPLTGWEAAELDPPGARFLALRAQLTEFSRALAQRCQLADAERLFQ
LFREALTWAE EGQRVLAEL E QERPGVVLQQLQLHWTRHPDLPPAHFRKMWALATGLGSEAIRQECRWAWA
RCQDTWLALDQKLEASLKLPPVGSTASLCVSVPAAPAHPLRKAYSFDRNLGQSLSEPACHCHHAATIA
ACRRPEAGGALPQASPTVPPPSSDPRSLNRLQLVLAEMVATEREYVRALEYTMENYFPELDRPDVPPG
LRGQRAHLFGNLEKLRDFHCHFLELEACTRHPPRVAYAF LRHRVQFGMYALYSKNKPRSDALMSSYGH
TFFKDKQALGDHLDLASYLLKPIQRMGKYALLQELARACGGPTQELSALREAQSLVHFQLRHGNDLLA
MDAIQGGDVNLKEQGQLVRQDEFVVRTGRHKS VRRIFLFEELLLFSKPRHGPTGVDTFAYKRSFKMADLG
LTECCGNLNRFEIWFRRRKARDTFVLQASSLAIKQAWTADISHLWRQAVHNKEVRMAEMVSMGVGNKA
FRDIAPSEEAINDRTVNYVLKCREVRSRASIAPFDHDSL YLGASNSLPGDPASC SVLGS LNLHL YRDP
ALLGLRCLPL YSFP EEAAL EAE AELGGQPSLTAEDSEISSQCPSASGSSGSDSSCVSGQALGRGLEDLPC
V
```

TRTRPLE - GFP Tag - V

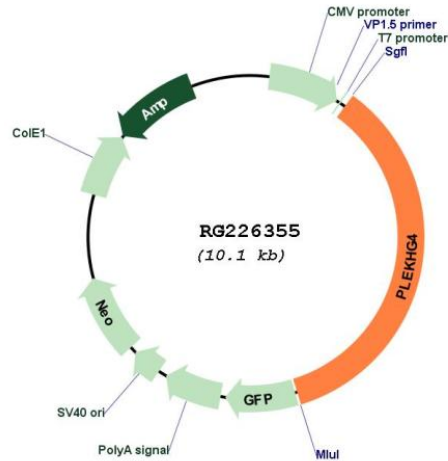
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001129729

ORF Size: 3573 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_001129729.3](#)

RefSeq Size: 4493 bp

RefSeq ORF: 3576 bp

Locus ID: 25894

UniProt ID: [Q58EX7](#)

Cytogenetics: 16q22.1

Gene Summary:

The protein encoded by this gene can function as a guanine nucleotide exchange factor (GEF) and may play a role in intracellular signaling and cytoskeleton dynamics at the Golgi apparatus. Polymorphisms in the region of this gene have been found to be associated with spinocerebellar ataxia in some study populations. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2015]