

Product datasheet for **RG214642**

KIAA0748 (TESPA1) (NM_001098815) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	KIAA0748
Synonyms:	HSPC257; ITPRID3; KIAA0748
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



ORF Nucleotide Sequence: >RG214642 representing NM_001098815
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGAGGCCTCTGTGCTGAGCCCCACATCCTGGGAGAAACGGCGGCCTGGCTCCGTGAGAGCCGTAAC
 GGCAGACCCAGGTCTAGAAAGAGGAGGCTGCCGCCGCCCTGCAGGATGTCCAGATCCTGAGCCTTCCAG
 CCTGGATGACGTTTTCCAGAAAGGAATCCAATCAATAAAATTGAAGACTGGCTGCAGGATTGCGGATAC
 TCTGAAGAAGGATTTCTGAGGAAGCAGGACAGTTTATCTACAATGGCTTCTGCAGCCATGGGACCAGCT
 TTGAAGATGACTTGACCCTGGGAGCGGAGGCCACACTACTGGCCGCCAATGGCAAACCTTTCTCCAGGAG
 TTTCCCTCGAGACAGCCAGGCCTTGCCAGCTACTTGATCTTGGCTGTAGTTTGGCTTCCAGCAGCATGACT
 GGGGGGACCAACAAGACTAGTTCAAGCATCTCAGAAATCTGGACAAAGTGCAAGAAGATGCAGAAGATG
 TCCTCTTCAGTCTGGCTTTGGCCAAGAGGATCACAAGACACTTCTCGGATACCCGCCGATTTTTTAC
 CACCCCTCTCAGGCCAAGGGCATTGATTTCCAGCTCTTCTGAAGTCCAGGTGCGGAGGATTGAAATG
 GAAGACCCCTGCCTCATGCTGCCAGCAGGTTTAAGCAGGTGCAAACTGGCTGTCACTGCTGATGCCT
 TCTTCTGTCTCTACTCCTATGTGTCTAAGACACCTGTCCAAAAGTTCACACCATCCCACATGTTCTGGAA
 TTGCAACCATCCAAGTATGTGCCATCCATCAGGATTCTGTCCGAGAGCCTGAACCCAGTCACCCAGA
 GACCGCCTTCGAAAGCCATCTCCAAGATGTGTCTGTACACATGCCCCGAGACCGGCCACCCACCC
 ACAACACCCCAAGGAACAGTTTGGACCAAGTTGTGTTGGAAGTGATGGACAAAGTGAAAGAAGAGAA
 GCAGTTCTCCAGCAAGACTCTGATTTGGGGCAATTCTCACAGGAAGATCCTGTGCCCTGCTGAGGGT
 AAGAAGTTGCCACTTCTCCCTATCCATGTGTCTTCTGCTGTGAAGAGGAACACAGCAGAGGATGTCCA
 CAGTGTAGCACCATCCAACTCTGGATTGGAACCCCAAGGTACCCTGTTGCACACATTCTTGCCCAT
 AGAAGATCCACAGTGGAGCACAGACCCAGCTCAGATAAGGAGAGAGCTGTGTAGTCTACCAGCCACCAAT
 ACGGAAACCATCCAGCAAGGATGAGACTTTCTGGAAAAGAAAGAGCAGAGCAAGAAAGAGCCTCTTCC
 AGAAGAATCTCATGGGCAGGAAGGTTAAGTCTTGGACCTGTCCATACCCAGCAGAAATGGAAGCAGAG
 TGTAGACAGACAGAATGCGTCGGTCTTTAAGCCAGCAGCCACAGGACACTTTTGAATTGGAGGAGGTG
 CAAAGCAACAGTGAGGAGGAGCAGAGTCAGAGTCGCTGGCCAGCAGACCCAGGCACCCCAACCAACC
 AGACTTTTGTGGCAAGACTCG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG214642 representing NM_001098815
 Red=Cloning site Green=Tags(s)

MEASVLSPTSWEKRRRAWLRQSRNWQTQVLEEEAAAALQDVPDPEPSSLDDVFQEGNPINKIEDWLQDCGY
 SEEGFSEEAGQFIYNGFCSHGTSFEDDLTLGAEATLLAANGKLFSSRFLETARPCQLLDLGCSSLASSMT
 GGTNKTSSSISEILDKVQEDAEDVLFSLGFGQEDHKDTSRIPARFFFTPSQAKGIDFQLFLKSQVRRIM
 EDPCLMLASRFKQVQTLAVTADAFCLYSYVSKTPVQKFTPSHMFWNCNHPDVPISIRILSREPEPQSPR
 DRLRKAISKMCLYTCPRDRPPPHNTPKRNSLDQVVLEVMDKVKEEKQFLQQSDLGQFSQEDPVPPAEG
 KKLPTSPYPCVFCCEETQQRMSVLAQSLDSNPKVPCCTHSLPIEDPQWSTDPAQIRRELCSLPATN
 TETHPAKDETFWKRKSRARKSLFQKNLMGRKVKSLDLSITQQKWKQSVDRPELRRSLSQQPQDTFDLEEV
 QSNSEEEQSQRWPSRPRHPHHHTFAGKDS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001098815

ORF Size: 1563 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001098815.3](#)

RefSeq Size: 3765 bp

RefSeq ORF: 1566 bp

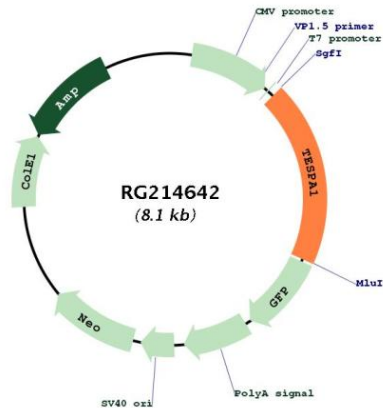
Locus ID: 9840

UniProt ID: [A2RU30](#)

Cytogenetics: 12q13.2

Gene Summary: Required for the development and maturation of T-cells, its function being essential for the late stages of thymocyte development (By similarity). Plays a role in T-cell antigen receptor (TCR)-mediated activation of the ERK and NFAT signaling pathways, possibly by serving as a scaffolding protein that promotes the assembly of the LAT signalosome in thymocytes. May play a role in the regulation of inositol 1,4,5-trisphosphate receptor-mediated Ca^{2+} release and mitochondrial Ca^{2+} uptake via the mitochondria-associated endoplasmic reticulum membrane (MAM) compartment.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG214642