

## Product datasheet for **KN214986**

### TRF4 2 (PAPD5) Human Gene Knockout Kit (CRISPR)

#### Product data:

**Product Type:** Knockout Kits (CRISPR)  
**Format:** 2 gRNA vectors, 1 GFP-puro donor, 1 scramble control  
**Donor DNA:** GFP-puro  
**Symbol:** TRF4 2  
**Locus ID:** 64282  
**Components:** **KN214986G1**, TRF4 2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GTGGAGTGCTCCCACGTACC  
**KN214986G2**, TRF4 2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: TCCCACGTACCTGGGCGTCC  
**KN214986D**, donor DNA containing left and right homologous arms and GFP-puro functional cassette.

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

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GGTGTCCGGG CGCAGCCATG ACCCAGTCAC GTAGCGATAG CGGAGTGTAT ACTGGCTTAA CTATGCGGCA
TCAGAGCAGA TTGTA CTGAG AGTGCACCAT ATGCGGTGTG AAATACCGCA CAGATGCGTA AGGAGAAAAT
ACCGCATCAG GCGCTCTTCC GCTTCCTCGC TCACTGACTC GCTGCGCTCG GTCGTTCCGC TCGCGCGAGC
GGTATCAGCT CACTCAAAGG CGGTAATACG GTTATCCACA GAATCAGGGG ATAACGCAGG AAAGAACATG
TGAGCAAAAG GCCAGCAAAA GGCCAGGAAC CGTAAAAAAG CCGCGTTGCT GGCGTTTTTC CATAGGCTCC
GCCCCCTGA CGAGCATCAC AAAAAATCGAC GCTCAAGTCA GAGGTGGCGA AACCCGACAG GACTATAAAG
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CGGTAACAT CGTCTTGAGT CCAACCCGGT AAGACACGAC TTATCGCCAC TGGCAGCAGC CACTGGTAAC
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 TCCTCTCTCG TTTCATCGGT ATCATT

**GE100003**, scramble sequence in pCas-Guide vector

**Disclaimer:**

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

**RefSeq:**

[NM\\_001040284](#), [NM\\_001040285](#), [NM\\_022447](#), [NM\\_001365323](#), [NM\\_001365324](#)

**UniProt ID:**

[Q8NDF8](#)

**Synonyms:**

TRF4-2

**Summary:**

Terminal nucleotidyltransferase that catalyzes preferentially the transfer of ATP and GTP on RNA 3' poly(A) tail creating a heterogeneous 3' poly(A) tail leading to mRNAs stabilization by protecting mRNAs from active deadenylation (PubMed:21788334, PubMed:30026317). Also functions as a catalytic subunit of a TRAMP-like complex which has a poly(A) RNA polymerase activity and is involved in a post-transcriptional quality control mechanism. Polyadenylation with short oligo(A) tails is required for the degradative activity of the exosome on several of its nuclear RNA substrates. Doesn't need a cofactor for polyadenylation activity (in vitro) (PubMed:21788334, PubMed:21855801). Required for cytoplasmic polyadenylation of mRNAs involved in carbohydrate metabolism, including the glucose transporter SLC2A1/GLUT1 (PubMed:28383716). Plays a role in replication-dependent histone mRNA degradation, probably through terminal uridylation of mature histone mRNAs. May play a role in sister chromatid cohesion (PubMed:18172165). Mediates 3' adenylation of the microRNA MIR21 followed by its 3'-to-5' trimming by the exoribonuclease PARN leading to degradation (PubMed:25049417). Mediates 3' adenylation of H/ACA box snoRNAs (small nucleolar RNAs) followed by its 3'-to-5' trimming by the exoribonuclease PARN which enhances snoRNA stability and maturation (PubMed:22442037).[UniProtKB/Swiss-Prot Function]

**Product images:**
