

Specifications:

Gene:	rTnfsf9
Accession:	NP_852049
Insert size:	939bp
Concentration:	10µg at 0.2µg/µL

**r4-1BBL/TNFSF9
cDNA Plasmid**

Tnfsf9 tumor necrosis factor (ligand) superfamily, member 9 [*Rattus norvegicus* (Norway rat)]

Also known as: CD137L; 4-1BB-L

Summary:

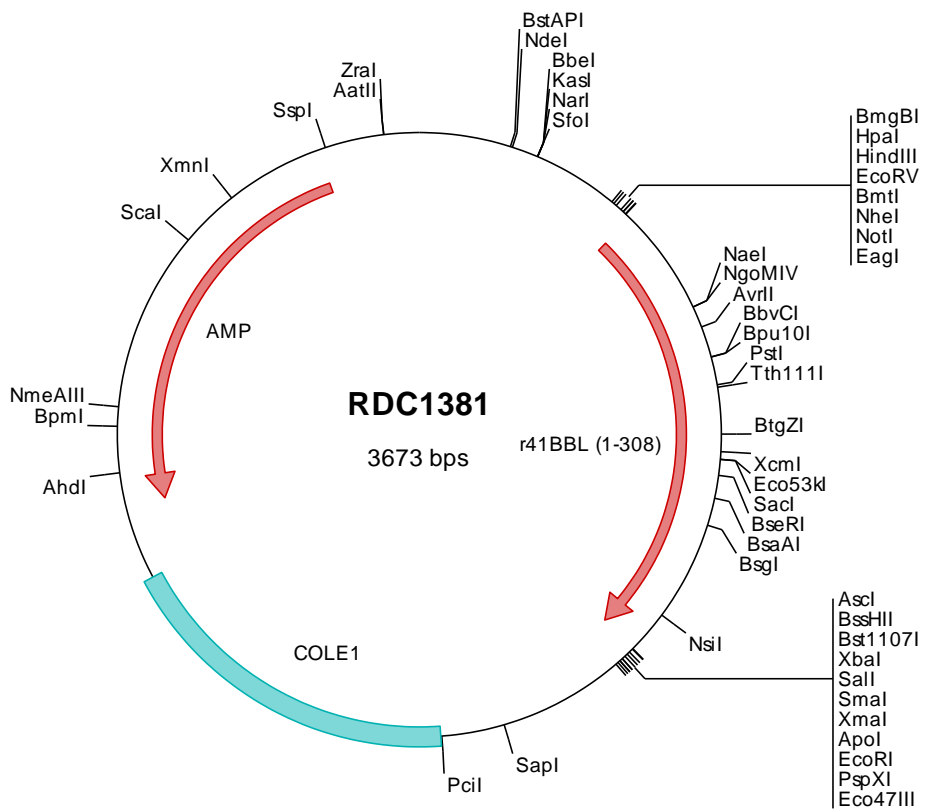
41BBL is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. It is a bidirectional signal transducer that acts as a ligand for TNFRSF9/4-1BB, which is a costimulatory receptor molecule in T lymphocytes. 41BBL and its receptor are involved in the antigen presentation process and in the generation of cytotoxic T cells. 41BBL is expressed by activated B cells, macrophages, dendritic cells, activated T cells, neurons and astrocytes.

Description

This shuttle vector contains the complete ORF for the gene of interest, along with a Kozak consensus sequence for optimal translation initiation. It is inserted NotI to AscI. The gene insert is flanked with convenient multiple cloning sites which can be used to easily cut and transfer the gene cassette into your desired expression vector.

Preparation and Storage

Formulation	cDNA is provided in 10 mM Tris-Cl, pH 8.5
Shipping	Ships at ambient temperature
Stability	1 year from date of receipt when stored at -20°C to -80°C
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.



FOR RESEARCH USE ONLY

NOT FOR USE IN HUMANS

> RDC1381 Plasmid DNA Sequence

```

1   tcgcgcgcttt  cggatgatgac  ggtgaaaacc  tctgacacat  gcagctcccc  gagacgggtca  cagcttgtct  gtaagcggat  gccggggagca  gacaagcccc
101  tcagggcgcg  tcagcgggtg  ttggcgggtg  tcggggctgg  cttactatg  cggcatcaga  gcagattgta  ctgagagtgc  accatatgcg  gtgtgaaata
201  ccgcacagat  gcgtaaggag  aaaataccgc  atcaggcgcc  attgccatt  caggctcgc  aactgttggg  aagggcgatc  ggtcggggcc  tcttcgctat
301  tacgccagct  ggcgaaaagg  ggatgtgctg  caagycgatt  aagttgggta  acgccagggt  tttcccagtc  acgacgttgt  aaaacgacgg  ccagtgaatt
401  ggagacgtgt  taacaagctt  ggatccgata  tcgctagcgc  ggccgccaacc  atggaccagc  acgcacttga  tgttgggggg  accgtggatg  ccggacatcc
501  accaggtaact  gcgcagcccc  cggatgcggc  gttccctcaga  gataccgggc  tcccttcgga  tgctgcgttc  ctggtagata  ctgtgcgctc  cacagaagct
601  gcgctgcccc  cggatgctgc  gtgcctcgcg  gttaatgttc  gggatctcga  ggccgcgtgg  ccgcccggcc  tgaactttg  ttcccggcac  ccgaggcttt
701  actgcctagg  cggcttgggt  ttgctgctcc  tggtcgctg  tgtccctatc  ttcatcgcga  tcctacctca  gcccgcgctc  acaatacca  cctgcctga
801  cctggatacc  ggagagaata  ctgcagacca  ggtcaacctc  gtttcccaca  ttgctgcgc  caacactaca  caacagggtt  ttcccgtgtt  cgccaagcta
901  ctggtataaaa  accaagcacc  gctgagtaac  acgactctga  actggcacag  ccaggaggga  gctgggagct  catacctgtc  tcgaggtctg  aggtacgagg
1001  aggacaaaaa  ggagtgggtg  gtggacagtc  ctgggtctca  ctacgtgttc  ttggaactga  agctcagttc  aacgtccata  aacacaggcc  gcaaggtgca
1101  gggctgggtc  tcccttgttt  tgcaagcaaa  gcctcaggtg  gatcaacctg  acagcttggc  cctgacagtg  gaattgttcc  cttgctccat  ggaggacaaa
1201  ttagtggatg  gttcctggaa  tgcctctgtt  cgctgaagg  ctggtcaccg  cctcagttgt  gatctgagtg  cctatctgca  tggagcccag  gatgcataca
1301  gagactggga  gctgtctcat  gccaacacca  ccagcttttg  actttcctt  gttgaaacct  acccccctca  gggataaggc  gccccagtat  actctagagt
1401  cgacacccgg  ggaattctct  gagcgcctct  ctctagcttg  gcgtaaatcat  ggtcatagct  gtttccctgt  tgaaattggt  atccgctcac  aattccacac
1501  aacatacgag  ccggaagcat  aaagtgtaaa  gcctgggggt  cctaataagt  gagctaact  acattaattg  cgttgcgctc  actgcccgtc  ttccagtccg
1601  gaaaacctgt  gtgccaagct  cattaatgaa  tcggccaacg  cgcggggaga  ggcggtttgc  gtattggggc  ctctccgct  tcctcgctca  ctgactcgct
1701  gcgctcgttc  gttcggctgc  ggcgagcgg  atcagctcac  tcaaaagcgg  taatacgttt  atccacagaa  tcagggggata  acgcaggaaa  gaacatgtga
1801  gcaaaaagcc  agcaaaaagg  caggaaccgt  aaaaagccg  cgttgcctgc  gtttttccat  aggctccgcc  cccctgacga  gcatacaaaa  aatcgacctc
1901  caagtcaag  gtggcgaaac  ccgacaggac  tataaagata  ccaggcgctt  cccctggaa  gctccctcgt  gcgctctcct  gttccgacct  tgccgcttac
2001  cggataacct  tccgcttctc  tcccttcggg  aagcgtggcg  ctttctcaat  gctcacgctg  taggtatctc  agttcgggtg  aggtcgttcc  ctccaagctg
2101  ggctgtgtgc  acgaaccccc  atttcagccc  gaccctgcg  ccttatccgg  taactatcgt  cttgagtcca  acccgtaag  acacgactta  tcgccactgg
2201  cagcagccac  tggtaacagg  cttagcagag  cgaggtatgt  aggcgggtgt  acagagtct  tgaagtgggt  gcctaactac  ggctacacta  gaaggacagt
2301  atttggatc  tgcgctctgc  tgaagccagt  taccttcgga  aaaagagtgt  gtgactcttg  atccggcaaa  caaacaccg  ctggtagcgg  tggttttttt
2401  gtttgcaagc  agcagattac  gcgcagaaaa  aaaggatctc  aagaagatcc  tttgatcttt  tctacggggg  ctgacgctca  ttggaacgaa  aactcacgtt
2501  aagggatttt  ggatcatgaga  ttatcaaaaa  ggatcttcac  ctagatcctt  ttaaattaaa  aatgaagttt  taaatcaatc  taaagtatat  atgagtaaac
2601  ttggtctgac  agttaccaat  gcttaatcag  tgaggcacct  atctcagcga  tctgtctatt  tcgttcatcc  atagttgctt  gactccccgt  cgtgtagata
2701  actacgatac  gggagggtct  accatctggc  cccagttcgt  caatgatacc  cgtcagccca  cgctcaccg  ctccagattt  atcagcaata  aaccagccag
2801  ccggaagggc  cgagcgcaga  agtggctcgt  caactttatc  cgctccatc  cagctctatta  attgttccg  ggaagctaga  gtaagttagt  cgccagttaa
2901  tagtttgcgc  aacgttgggt  ccattgctac  aggcactcgt  gtgtcacgct  cgtcgtttgg  tatggcttca  ttcagctccg  gttcccacg  atcaaggcga
3001  gttacatgat  cccccatggt  gtgcacaaaa  gcggttagct  ccttcggtcc  tccgatcgtt  gtcagaagta  agttggccgc  agtggtatca  ctcatgggta
3101  tggcagcact  gcataattct  cttactgtca  tgcacatcgt  aagatgcttt  tctgtgactg  gtgagtactc  aaccaagtca  tcttgagaat  agtgtatgcg
3201  gcgaccgagt  tgccttggcc  cggcgtcaat  acgggataat  accgcgccac  atagcagaac  tttaaaagt  ctcatcattg  gaaaaagctt  ttccggggca
3301  aaactctcaa  ggtacttacc  gctgttgaga  tccagtctga  tgtaacccac  tctgtcaacc  aactgatctt  cagcatcttt  tactttcacc  agcgtttctg
3401  ggtgagcaaa  aacaggaagg  caaaatgccg  caaaaaaggg  aataaggggc  acacggaat  gttgaatact  catactcttc  ctttttcaat  attattgaag
3501  catttatcag  ggttattgtc  tcatgagcgg  atacatattt  gaatgtattt  agaaaaataa  acaaataggg  gttccgcgca  catttccccg  aaaagtgcga
3601  cctgacgtct  aagaaacct  tattatcatg  acattaacct  ataaaaatag  gcgtatcacg  aggcctttc  gtc

```

> RDC1381 Translated Insert Sequence

```

1   mdqhaldivg  tvdaghppgt  aqppdaaflr  dtglpsdaaf  lvdtrvltea  alpdaacpa  vnvrdpeaaw  ppalnfcshr  prlyclgglv  llllvacvpi
101  firilppal  tittspddt  gentadvqtp  vshigcantt  qqgfvpfakl  laknqasln  tllnwhsqeg  agssylsrgl  ryeedkkelv  vdsplgyyvf
201  lelklspst  ntrkrvqgw  slvlqakpv  dhldslaltv  elfpcsmedk  lvdrswrll  rlkaghrslv  drraylhgaq  dayrdwelsh  anttsfglfl
301  vkpdpqq

```