**A**

```
1     acagtctctaatcagactcgggagggacagaggcaaacctgtaaagcccctggggaaaaga
61    aagacaaaacaaaaaccttgacttcagttattttgtttgttgttttctttgaaaaagac
121   aactgtaactacagtggctgttggaatttgcccctcagttcttgggatgccagcttcaaa
181   gtaacatcagtttctgaggacgcctttctgtactcagagcgttttgcctcttgtgaacgg
241   ctttgttactgccagctttgggaggtccagtggcattcttctctcacgaaggtcttcctg
301   attggttcaacaaatccctgtgaggcaatggccgaccccagtgtggtttatccttcagtc
1                                   M  A  D  P  S  V  V  Y  P  S  V
361   tttgtggtggatgggaagaccagtgcaacttttcccccggatccacggaaaaaacggaca
12     F  V  V  D  G  K  T  S  A  T  F  P  P  D  P  R  K  K  R  T
421   gggacggcacagacactcctctttgtgctgctgatcctggtgctgcttggcatactgatt
32     G  T  A  Q  T  L  L  F  V  L  L  I  L  V  L  L  G  I  L  I
481   gagggttatttcatcttccagctgtggacaagaaactctgaaaaagataagatcagcatc
52     E  G  Y  F  I  F  Q  L  W  T  R  N  S  E  K  D  K  I  S  I
541   aatgaaaacagtcctcaaaagtcaatccaagatgaaaatgaaataaaatcaatccaagct
72     N  E  N  S  P  Q  K  S  I  Q  D  E  N  E  I  K  S  I  Q  A
601   gaatgggatcagaaaaagcccaaagctcatgttacaggctgtaactgcaatgccagtaaa
92     E  W  D  Q  K  K  P  K  A  H  V  T  G  C  N  C  N  A  S  K
661   gaaggaaagatgttctgggaatctgtgaatggagatgccttcacacacacgatagactat
112    E  G  K  M  F  W  E  S  V  N  G  D  A  F  T  H  T  I  D  Y
721   aaagatggttccttggtcatcaagactgaaggcttttacttcatttactcaaaaatcttt
132    K  D  G  S  L  V  I  K  T  E  G  F  Y  F  I  Y  S  K  I  F
781   tatggtcagctggattgtaaaacctcagccaaaggaacctttaagcatggtgtttacaag
152    Y  G  Q  L  D  C  K  T  S  A  K  G  T  F  K  H  G  V  Y  K
841   tcaacacagaggtatccgggagacctggagctcatgagctccaagaggtaccactgcaga
172    S  T  Q  R  Y  P  G  D  L  E  L  M  S  S  K  R  Y  H  C  R
901   aatgataaagaagacatgctagacaacagcttcctgggaggaatctatcatcttacagaa
192    N  D  K  E  D  M  L  D  N  S  F  L  G  G  I  Y  H  L  T  E
961   ggggaccagatttttgttaaagtgaatcaaaaaaaccttatccggctgcagtccacctct
212    G  D  Q  I  F  V  K  V  N  Q  K  N  L  I  R  L  Q  S  T  S
1021  gaaaacttttttggagctttttttgatttagctttcttccttttagctctagtccttttta
232    E  N  F  F  G  A  F  L  I  *
1081  aaacagaaccatggaagcaactaatttctacattcagctctatgtctcttagctcagcag
1141  tggcgtctggttggttggaggcaggaggtattgacaaatgctgctgtagaatgtcattga
1201  1taagattgttgactggatcttatctctcggcatttgacagttaattaaacccagaacaca
1261  cacatactggtcctaactacagtaatcaatctattatcggcaaggtaacatactggcctt
1321  accatttgaaatttcttttgaagatctaatcatttatattgaacagagaggaacacacta
1381  gtggacagcctcaagtatgtcatttaaacgattagagatgtcaatcttcattaggccatt
1441  tagacataaagaatcatccttcttgagcgacagaaattaagctctccttttaaaattgaa
1501  aatatgactatagtacgaaagtgctagagagaatagagtactatcagagctgtgacttt
1561  gggcaggtcctaaggattattgaggaataccaaaggggtctttgatagctagaaccatgt
1621  gctcttaagagacttctcaatgtgaatgtactgctctccaggaatgtgtgacctagatgt
1681  cgtaaagagacagtgagtgggacacatgatacaatcctgctttttttgcactgtaataag
```

```
1741 atatttgaattctgggtagtataatgtaacagaaccccattaaatgtatgtttttcaata
1801 aagaaaaaaaaaaaaaaaaaaaaaaa
```

# B

```
1    ttttttttttttcttctgcagctgtgacgcgaagcaggctatttcctgaaaagaggcgcctcg
63   gggctccgtttaaaggaactaaaagccgaaaaggcagagaactatcgattaggagcaatt
123  tctgggctaacagcgtcacctgcgctcccgcagatacttcctaaccaccttcaaggtgtc
183  cggatcccgcgaagatgcagtccccgatgcgtttgttcggtttggtttgagtttgaataa
243  ctatatgaagcggaaatataacttttccgcgaaggattggtgcgacgaacgcctaaaggg
303  gaagatattgccgtgatcacagcagaaggacaacgatttcaagacctcggagggccccca
363  cgttggagacctcgatggccgtcccggcggagtgaggccgggcagcgcaggagggtgcag
423  agtggatggtgggggcgatggagcgatcgccagggagaacaggaggctgggcgtttctg
1                    M  E  R  S  P  G  R  T  G  G  W  A  F  L
483  atcctgagctgtttgctctcccgctcgctgacctggggcatcccatcgggggggagggac
15    I  L  S  C  L  L  S  R  S  L  T  W  G  I  P  S  G  G  R  D
543  gctcccgccaaccagtccgcgacctgcagcgccgatgagtttgcacaccggggctactgc
35    A  P  A  N  Q  S  A  T  C  S  A  D  E  F  A  H  R  G  Y  C
603  tgcaaccggggccacccagggttccggatgacgaaggcttgcgcgggggcgggcttgagg
55    C  N  R  G  H  P  G  F  R  M  T  K  A  C  A  G  A  G  L  R
663  acgacgtgcgaaccctgcagcaacggcacctatctggagctgagcaacgctgccacgaag
75    T  T  C  E  P  C  S  N  G  T  Y  L  E  L  S  N  A  A  T  K
723  tgcatcaaatgtcgaaagtgtgaatcggatgaaatggaggcgtcgccctgtcgggccggg
95    C  I  K  C  R  K  C  E  S  D  E  M  E  A  S  P  C  R  A  G
783  aaaaaccgggagtgccgctgccggccgggattgtacgtcgatcacatctcgccctacaca
115   K  N  R  E  C  R  C  R  P  G  L  Y  V  D  H  I  S  P  Y  T
843  aggatatgcaagccctgcgcacagtgtggtcctggattccgaaaaaaaacaccctgcacc
135   R  I  C  K  P  C  A  Q  C  G  P  G  F  R  K  K  T  P  C  T
903  catgatgctaacgcagtgtgtgagtgtctggagtcttattacctcgccagcaatgggagc
155   H  D  A  N  A  V  C  E  C  L  E  S  Y  Y  L  A  S  N  G  S
963  tgtgtaccttgtgttgagtgtaacagtcgcaaggagtgcagccacctgtgccctacatcc
175   C  V  P  C  V  E  C  N  S  R  K  E  C  S  H  L  C  P  T  S
1023 actacccctagagaacccatgaaggttgcacctccaccagagatccctaacaactggtgg
195   T  T  P  R  E  P  M  K  V  A  P  P  P  E  I  P  N  N  W  W
1083 caaaccattgcaatcagtctggcggtcgctatggcttgtgctgtagttgtagttggtggt
215   Q  T  I  A  I  S  L  A  V  A  M  A  C  A  V  V  V  V  G  G
1143 agaagaatccataaaaggatcaggaggagcagagcgagttcatactacacaggaaataca
235   R  R  I  H  K  R  I  R  R  S  R  A  S  S  Y  Y  T  G  N  T
1203 tgcattcagagcactacatctcagaactcagagcttctcccttcaccaaccgcctccctg
255   C  I  Q  S  T  T  S  Q  N  S  E  L  L  P  S  P  T  A  S  L
1263 agaaattgtgatcctgtgttcggtccattcccaccgcagcacaaacagcctgagctgcca
275   R  N  C  D  P  V  F  G  P  F  P  P  Q  H  K  Q  P  E  L  P
1323 gattgtgttccacgtacaattaacatctctcagttcctgtactctgtgatggaagtggtg
295   D  C  V  P  R  T  I  N  I  S  Q  F  L  Y  S  V  M  E  V  V
```

```
1383 cccgtctcccgatggaaggagctcattcgccggctgggcgtctcggagcgggagatcgag
315   P  V  S  R  W  K  E  L  I  R  R  L  G  V  S  E  R  E  I  E
1443 agggcggagcgggacaaccgcgtgtacagcgaggcccagtactacatgatccagctgtgg
335   R  A  E  R  D  N  R  V  Y  S  E  A  Q  Y  Y  M  I  Q  L  W
1503 agcagggcaggggggagggggggcggcctgtccccctccctcccgctgccacgccccctc
355   S  R  A  G  G  G  G  G  G  L  S  P  S  L  P  L  P  R  P  L
1563 gcgctctccctcttgcagaccctgcgcgagatgggcctgggggctgtgctgagcagctg
375   A  L  S  L  L  Q  T  L  R  E  M  G  L  G  G  C  A  E  Q  L
1623 gaccagcggtataacatcagcctggagtagacagggccaacaggtttagagcatggagga
395   D  Q  R  Y  N  I  S  L  E  *
1683 gcagggggcaggagagctcagctagggagaaacagaggaagagagggaagcaaattaaac
1743 gtcatgagcataagcacatcttcagtttatattgcaagtcatgcctaatttacaacatgc
1803 agactattcttctactacaggtatatgtaatgtgtagatagaacctatatatatcaatata
1864 tgacctgtccagagcactgaacagagaaactgttaaaaaaaaaaaaaaaaaaaaaaaaa
1924 aa
```

# C

```
1    tcgttccagcacaacacgcgtttctgcgcacaactccgctgactccccgcactgaaaccg
61   cagattgtgtattgcaattaaaacgagaaagacgcagatcgtcttcggataaatcgactc
121  acctgcgtcgtcccgagttgagagggcgtgctgttggcgaagacgctgaaatttgacact
181  ggaagctgaacctcggaataggctgaagccggcagggaagatttcagtgtgacaagacgc
241  ggtatcgtgagaaacatgttttggaaaaccctgggtcttgcgcttgctgtcacgatgctt
1                    M  F  W  K  T  L  G  L  A  L  A  V  T  M  L
301  catgtggagagccagatgtacatcctgccctacccccccggacaacagaggacatgtctgc
16    H  V  E  S  Q  M  Y  I  L  P  Y  P  P  D  N  R  G  H  V  C
361  cggaacccagagagggaatactatcgttctatggtgcaccgctgctgctcacagtgtcca
36    R  N  P  E  R  E  Y  Y  R  S  M  V  H  R  C  C  S  Q  C  P
421  ccagggacccgtctgattgaggattgcacagagacaaaggacacggtgtgtcaaaagtgt
56    P  G  T  R  L  I  E  D  C  T  E  T  K  D  T  V  C  Q  K  C
481  cggaacggctcctacacagatcgctggcactaccacaacaactgcttcagatgcacaaag
76    R  N  G  S  Y  T  D  R  W  H  Y  H  N  N  C  F  R  C  T  K
541  gcctgttatcaaggcctggaggaggtccaaccctgcacagtcacctccccgagaaagtgt
96    A  C  Y  Q  G  L  E  E  V  Q  P  C  T  V  T  S  P  R  K  C
601  gtctgcaagggaggctactgctcttttacctcaagcagctactcctgtgacacctgcagc
116   V  C  K  G  G  Y  C  S  F  T  S  S  S  Y  S  C  D  T  C  S
661  atgtactccagctgcccgcctggccagggagtctcagagaaagggaccgcaaactctgat
136   M  Y  S  S  C  P  P  G  Q  G  V  S  E  K  G  T  A  N  S  D
721  gtagtgtgctctccctgccctcctggtaccttctctgccacggactccagcacagagatc
156   V  V  C  S  P  C  P  P  G  T  F  S  A  T  D  S  S  T  E  I
781  tgtcagccccacactgactgtgcctcacacgggaccagtgagctgcgcgccgggacaaac
176   C  Q  P  H  T  D  C  A  S  H  G  T  S  E  L  R  A  G  T  N
841  agtgcagacgccgtctgtcaccccaaaatggcaaccacacctcccagggctgtcgctgct
196   S  A  D  A  V  C  H  P  K  M  A  T  T  P  P  R  A  V  A  A
```

```
901  gagactctcggcaactctgtcctgcacaggatggacgccctttctctgcacggccacct
216   E  T  L  G  N  S  V  L  H  R  M  D  A  P  F  S  A  R  P  P
961  tctctgcctcactctgttcccaccacagtgcaggccgacaagaccgtagctgtcatcgac
236   S  L  P  H  S  V  P  T  T  V  Q  A  D  K  T  V  A  V  I  D
1021 aagaccaacatcatcgctggggcagtagctggcggtgcagtgctggtcactatcatcata
256   K  T  N  I  I  A  G  A  V  A  G  G  A  V  L  V  T  I  I  I
1081 gtgatgtttatcattggacgctgcatctacaacagaactgcagcccttcaagagaatgcc
276   V  M  F  I  I  G  R  C  I  Y  N  R  T  A  A  L  Q  E  N  A
1141 gatgcagaggccaagaaggtcctgaactgtacccctggggccctacagcggaactcctcc
296   D  A  E  A  K  K  V  L  N  C  T  P  G  A  L  Q  R  N  S  S
1201 ggcaacctccacccccttcgcaggaacggctgtgcctgctgggagagacggaatccagc
316   G  N  L  H  P  P  S  Q  E  R  L  C  L  L  G  E  T  E  S  S
1261 caatccgaactctcgtcagccttgggcagccagtcgggcgcggagacgaccacatcgagc
336   Q  S  E  L  S  S  A  L  G  S  Q  S  G  A  E  T  T  T  S  S
1321 agccagagagggagccccagctgctgtcaagatagtccacaggccaccagtcctcagctg
356   S  Q  R  G  S  P  S  C  C  Q  D  S  P  Q  A  T  S  P  Q  L
1381 aaagtgaacttccaggccaccatcagctgccacctcccgaccaacacacactgctgctct
376   K  V  N  F  Q  A  T  I  S  C  H  L  P  T  N  T  H  C  C  S
1441 cccccacgggctgaggggtgggctactccccggagccctatatgttcagtccgaatttc
396   P  P  R  A  E  G  V  G  Y  S  P  E  P  Y  M  F  S  P  N  F
1501 cccctctcccaggaggagacgtccatctcccagtgccaggacaaggacaacaaggacgcc
416   P  L  S  Q  E  E  T  S  I  S  Q  C  Q  D  K  D  N  K  D  A
1561 cgcccagctgtgcaggaagtcgggaaggcgatgtgagcacgccgagccatgcaagggcag
436   R  P  A  V  Q  E  V  G  K  A  M  *
1621 taccagggcggcaacatgaggagacaagagcagccagtcatgtggaccatggagagatcc
1681 aaactcatggcgttaatttaaccagggctaattgttctttttcaaatggatcagtagaac
1741 tcagaggagaactcagaggagtacggtcatcaacctagtgtcacctagtgtggtcattaa
1801 cctagtgtaacctcgtagaagattcttgttacagctctcgttattaacaaagaaaaaaaa
1861 aaaaaaaaaaaaaaa
```

# D

```
1    aggcttgctagttcccagagatgcagggagatgtaattagcagtactcgtccggaaagaa
61   tgtactattttgcgtttcctccattaattccaaaaaatcatcttggaatgatgcaaagct
121  cattgctttatagggactacaggtttcttgggcaaattatgaaatcgtacatcgttcaca
181  aaagcagcctttaatatcaggatcctacacaactaggaacaatattttcagatgagacgc
241  gcggtcttttcttgttgatgaacagctttctgattcaggtttaaagttaggttcctgtgc
301  acatatttgaataaaaaaaatagttaaaatattgaaacagacagccacttcaaatctata
361  ttttaaaggagacctaaacaaacttttttcacttttggagaaatcggtaaaatctgaa
421  tttgtagttactaaaatgacgtattattttaatagttttatttctgaattttgtgctaca
481  cgtgaggcgttactcttttcagctacgcctcagactcaactgttaaaaaaagtttttgt
541  tcttcactgaccagaaggagtattctgcgcagcgctggaaaagcagatcgaattccaggg
601  tccacgtgggattaaaaaaagaacatgaatttgaaaacgggtgttgcattttggctgagt
1                              M  N  L  K  T  G  V  A  F  W  L  S
```

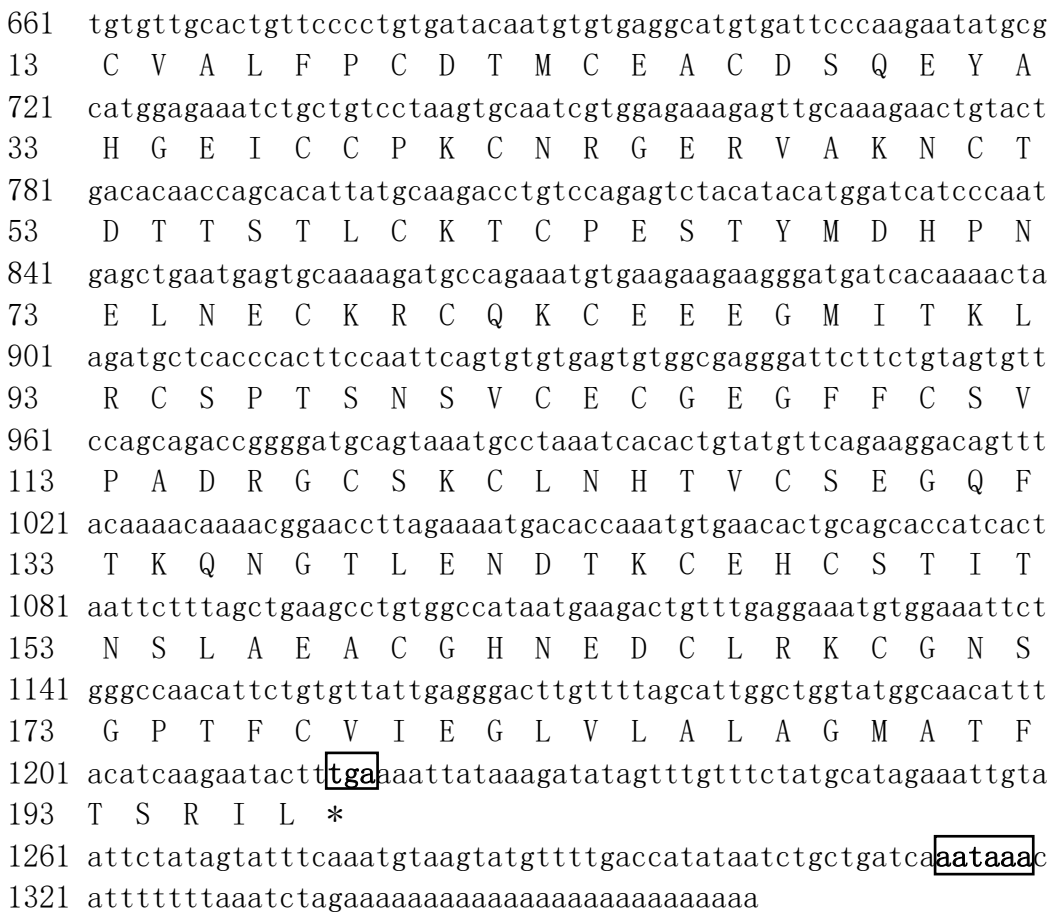



**Figure S1.** cDNA and deduced amino acid sequences of *Lo*TNFSF14 (**A**), TNFRSF1A (**B**), TNFRSF1B (**C**), and TNFRSF14 (**D**) in spotted gar**.** The open reading frame (ORF) is shown in upper case and the 5'-UTR and 3'-UTR sequences are in lower case. The translation initiation codon, stop codon and polyadenylation signal site are boxed. The transmembrane regions are shaded in gray.