

CLUSTALW Result

WARNING: possibly wrong combination

```
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Selected type :    PROTEIN
Query sequence:    DNA
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```

[\[clustalw.aln\]](#)[\[clustalw.dnd\]](#)[\[readme\]](#)

Select tree menu ▼ Exec

CLUSTAL 2.1 Multiple Sequence Alignments

```
Sequence type explicitly set to Protein
Sequence format is Pearson
Sequence 1: LR757995.1_Wuhanvirus           200 aa
Sequence 2: LR757998.1_Wuhanvirus           200 aa
Sequence 3: MN988713.1_Wuhanvirus           200 aa
Sequence 4: MT192773.1_SARS-CoV-2/VNM       200 aa
Sequence 5: MT192772.1_SARS-CoV-2/VNM       200 aa
Sequence 6: MN996528.1--_SARS-CoV-2/VNM     200 aa
Sequence 7: MT163720.1-_SARS-CoV-2/USA      200 aa
Sequence 8: MT163716.1-_SARS-CoV-2/USA      200 aa
Sequence 9: MT012098.1_SARS-CoV-2/IND       200 aa
Sequence 10: MN996529.1_SARS-CoV-2/CHN      200 aa
Sequence 11: NC_004718.3_SARS_coronavirus    205 aa
Sequence 12: AY274119.3_SARS-related_coronavirus 205 aa
Sequence 13: MG772933.1_Bat_SARS-like_coronavirus 200 aa
Sequence 14: NC_014470.1_Bat_coronavirus    209 aa
Sequence 15: KU740200.1_MERS/Egypt         207 aa
Start of Pairwise alignments
Aligning...
```

```
(Partial alignment)
Sequences (1:2) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:3) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:4) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:5) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:6) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:7) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:8) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:9) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (1:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (1:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (1:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (1:14) Aligned. Score: 23.5
```

(Partial alignment)
Sequences (1:15) Aligned. Score: 16
(Partial alignment)
Sequences (2:3) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:4) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:5) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:6) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:7) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:8) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:9) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (2:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (2:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (2:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (2:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (2:15) Aligned. Score: 16
(Partial alignment)
Sequences (3:4) Aligned. Score: 41.5
(Partial alignment)
Sequences (3:5) Aligned. Score: 41.5
(Partial alignment)
Sequences (3:6) Aligned. Score: 41.5
(Partial alignment)
Sequences (3:7) Aligned. Score: 41.5
(Partial alignment)
Sequences (3:8) Aligned. Score: 41.5
(Partial alignment)
Sequences (3:9) Aligned. Score: 41.5
(Partial alignment)
Sequences (3:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (3:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (3:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (3:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (3:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (3:15) Aligned. Score: 16
(Partial alignment)
Sequences (4:5) Aligned. Score: 41.5
(Partial alignment)
Sequences (4:6) Aligned. Score: 41.5
(Partial alignment)
Sequences (4:7) Aligned. Score: 41.5
(Partial alignment)
Sequences (4:8) Aligned. Score: 41.5
(Partial alignment)
Sequences (4:9) Aligned. Score: 41.5
(Partial alignment)
Sequences (4:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (4:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (4:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (4:13) Aligned. Score: 39.5

(Partial alignment)
Sequences (4:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (4:15) Aligned. Score: 16
(Partial alignment)
Sequences (5:6) Aligned. Score: 41.5
(Partial alignment)
Sequences (5:7) Aligned. Score: 41.5
(Partial alignment)
Sequences (5:8) Aligned. Score: 41.5
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(Partial alignment)
Sequences (5:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (5:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (5:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (5:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (5:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (5:15) Aligned. Score: 16
(Partial alignment)
Sequences (6:7) Aligned. Score: 41.5
(Partial alignment)
Sequences (6:8) Aligned. Score: 41.5
(Partial alignment)
Sequences (6:9) Aligned. Score: 41.5
(Partial alignment)
Sequences (6:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (6:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (6:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (6:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (6:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (6:15) Aligned. Score: 16
(Partial alignment)
Sequences (7:8) Aligned. Score: 41.5
(Partial alignment)
Sequences (7:9) Aligned. Score: 41.5
(Partial alignment)
Sequences (7:10) Aligned. Score: 41.5
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Sequences (7:11) Aligned. Score: 61.5
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(Partial alignment)
Sequences (7:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (7:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (7:15) Aligned. Score: 16
(Partial alignment)
Sequences (8:9) Aligned. Score: 41.5
(Partial alignment)
Sequences (8:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (8:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (8:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (8:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (8:14) Aligned. Score: 23.5

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(Partial alignment)
Sequences (8:15) Aligned. Score: 16
(Partial alignment)
Sequences (9:10) Aligned. Score: 41.5
(Partial alignment)
Sequences (9:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (9:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (9:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (9:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (9:15) Aligned. Score: 16
(Partial alignment)
Sequences (10:11) Aligned. Score: 61.5
(Partial alignment)
Sequences (10:12) Aligned. Score: 61.5
(Partial alignment)
Sequences (10:13) Aligned. Score: 39.5
(Partial alignment)
Sequences (10:14) Aligned. Score: 23.5
(Partial alignment)
Sequences (10:15) Aligned. Score: 16
(Partial alignment)
Sequences (11:12) Aligned. Score: 84.3902
(Partial alignment)
Sequences (11:13) Aligned. Score: 61
(Partial alignment)
Sequences (11:14) Aligned. Score: 40.9756
(Partial alignment)
Sequences (11:15) Aligned. Score: 16.5854
(Partial alignment)
Sequences (12:13) Aligned. Score: 61
(Partial alignment)
Sequences (12:14) Aligned. Score: 40.9756
(Partial alignment)
Sequences (12:15) Aligned. Score: 16.5854
(Partial alignment)
Sequences (13:14) Aligned. Score: 35
(Partial alignment)
Sequences (13:15) Aligned. Score: 17.5
(Partial alignment)
Sequences (14:15) Aligned. Score: 23.6715
Guide tree file created: [clustalw.dnd]

```

There are 14 groups
Start of Multiple Alignment

```

Aligning...
Group 1: Sequences: 2      Score:3496
Group 2: Sequences: 3      Score:3133
Group 3: Sequences: 4      Score:2180
Group 4: Sequences: 5      Score:2242
Group 5: Sequences: 6      Score:2271
Group 6: Sequences: 7      Score:2287
Group 7: Sequences: 8      Score:2298
Group 8: Sequences: 9      Score:2306
Group 9: Sequences: 10     Score:2312
Group 10: Sequences: 11     Score:2316
Group 11: Sequences: 12     Score:2319
Group 12: Sequences: 13     Score:2149
Group 13: Sequences: 14     Score:1750
Group 14: Sequences: 15     Score:1805
Alignment Score 114535

```

CLUSTAL-Alignment file created [clustalw.aln]

clustalw.aln

CLUSTAL 2.1 multiple sequence alignment

```

NC_004718.3_SARS_coronavirus      -----GGTGTGGTACCTTCATGAAGGTCACC---AAACTGCTG-
AY274119.3_SARS-related_corona    -----GGTGTGGTACCTTCATGAAGGTCACC---AAACTGCTG-
LR757995.1_Wuhanvirus             -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MT192773.1_SARS-CoV-2/VNM        -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MN988713.1_Wuhanvirus             -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MT192772.1_SARS-CoV-2/VNM        -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MT163720.1_ SARS-CoV-2/USA        -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MT163716.1_ SARS-CoV-2/USA        -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MN996529.1_SARS-CoV-2/CHN        -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MN996528.1_ SARS-CoV-2/VNM        -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MT012098.1_SARS-CoV-2/IND        -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
LR757998.1_Wuhanvirus            -----GTTGTTTCGTTCTATGAAGACTTTTTAG---AGTATCATG-
MG772933.1_Bat_SARS-like_coron    -----GGTGTTCGTATTATGAAGACTTTCTAG---AGTACCATG-
NC_014470.1_Bat_coronavirus       -----TGTGTCCTATCTTTGCTACTTTTCTTGGTCATTATAATGC
KU740200.1_MERS/Egypt            GGTAATTACAGGAGTCCG-CCTATTACGGCGGATATT----GAACTTG-
                                   :**      :* . .      : :      .      **

```

```

NC_004718.3_SARS_coronavirus      -----CATT-AGAGACGTA CTTGTTGTTTTAA---ATAACGAACAAA
AY274119.3_SARS-related_corona    -----CATT-AGAGACGTA CTTGTTGTTTTAA---ATAACGAACAAA
LR757995.1_Wuhanvirus             -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MT192773.1_SARS-CoV-2/VNM        -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MN988713.1_Wuhanvirus             -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MT192772.1_SARS-CoV-2/VNM        -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MT163720.1_ SARS-CoV-2/USA        -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MT163716.1_ SARS-CoV-2/USA        -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MN996529.1_SARS-CoV-2/CHN        -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MN996528.1_ SARS-CoV-2/VNM        -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MT012098.1_SARS-CoV-2/IND        -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
LR757998.1_Wuhanvirus            -----ACGTT-CGTGTTGTTTTAG--ATTCAT---CTAAACGAACAAA
MG772933.1_Bat_SARS-like_coron    -----ACATT-CGTGTTGTCTTAG--ATTCAT---CTAAACGAACAAA
NC_014470.1_Bat_coronavirus       TAATCATCTTT-TGTTTTGTGTTAG-AATTACAAGATCTAAACGAACAAT
KU740200.1_MERS/Egypt            -----CATTGCTTCGAGCTTAGG----CTCTT----TAGTAAGAGTAT
                                   . **      : *      : *      : :      ** : . . . * : *

```

```

NC_004718.3_SARS_coronavirus      TAAAAATGTCTGATAATGGACCCCAATCAAACCAACGTAGTG-CCCCCG
AY274119.3_SARS-related_corona    TAAAAATGTCTGATAATGGACCCCAATCAAACCAACGTAGTG-CCCCCG
LR757995.1_Wuhanvirus             CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MT192773.1_SARS-CoV-2/VNM        CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MN988713.1_Wuhanvirus             CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MT192772.1_SARS-CoV-2/VNM        CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MT163720.1_ SARS-CoV-2/USA        CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MT163716.1_ SARS-CoV-2/USA        CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MN996529.1_SARS-CoV-2/CHN        CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MN996528.1_ SARS-CoV-2/VNM        CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MT012098.1_SARS-CoV-2/IND        CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
LR757998.1_Wuhanvirus            CTAAAATGTCTGATAATGGACCCCAA---AATCAGCGAAATG-CACCCCG
MG772933.1_Bat_SARS-like_coron    CTAAAATGTCTGATAATGGACCCCAA---AACCAACGTAGTG-CACCCCG
NC_014470.1_Bat_coronavirus       --AAAATGACTGATAATGGACAATCA---AACTCGCGTAATG-CGCCTCG
KU740200.1_MERS/Egypt            CTTAATTGATT-TTAACGAATCTCAA---TTTCATTGTTATGGCATCCCC
                                   :**:**: * :*** *.* . .*      : :      * : . . ** * * *

```

```

NC_004718.3_SARS_coronavirus      CATTACATTTGGTGGACCCACAGATTCAACTGACAATAACCAG--AATGG
AY274119.3_SARS-related_corona    CATTACATTTGGTGGACCCACAGATTCAACTGACAATAACCAG--AATGG
LR757995.1_Wuhanvirus             CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MT192773.1_SARS-CoV-2/VNM        CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MN988713.1_Wuhanvirus             CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MT192772.1_SARS-CoV-2/VNM        CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MT163720.1_ SARS-CoV-2/USA        CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MT163716.1_ SARS-CoV-2/USA        CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MN996529.1_SARS-CoV-2/CHN        CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MN996528.1_ SARS-CoV-2/VNM        CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MT012098.1_SARS-CoV-2/IND        CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
LR757998.1_Wuhanvirus            CATTACGTTTGGTGGACCCTCAGATTCAACTGGCAGTAACCAG--AATGG
MG772933.1_Bat_SARS-like_coron    CATTACATTTGGTGGACCCTCAGATTCAAGTGACAATAGCAAAA--AACGG
NC_014470.1_Bat_coronavirus       CATTACGTTTGGTG---TCTCAGATACCTCAGACAATAATCAG--AATGC

```

KU740200.1_MERS/Egypt

TGCTGCACCTCGTG-----CTGTTTCCTTTGCCGATAACAATGATATAA
. * . * . * * * * * : * : * : * . * * * . * * * * . * * * . * * .

NC_004718.3_SARS_coronavirus
AY274119.3_SARS-related_corona
LR757995.1_Wuhanvirus
MT192773.1_SARS-CoV-2/VNM
MN988713.1_Wuhanvirus
MT192772.1_SARS-CoV-2/VNM
MT163720.1_SARS-CoV-2/USA
MT163716.1_SARS-CoV-2/USA
MN996529.1_SARS-CoV-2/CHN
MN996528.1_SARS-CoV-2/VNM
MT012098.1_SARS-CoV-2/IND
LR757998.1_Wuhanvirus
MG772933.1_Bat_SARS-like_coron
NC_014470.1_Bat_coronavirus
KU740200.1_MERS/Egypt

AGGACGCAATGGGG-CAAGGCCAAAACAGCG---CC---
AGGACGCAATGGGG-CAAGGCCAAAACAGCG---CC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAACGCAGTGGGG-CGCGATCAAAAACAACG---TC---
AGAGCGCAATGGTG-CACGACCTAAACAACG---TC---
AGAACGTGCTGGAG-CGCGGCCAAAGCAAAG---AA---
CAAATACAAACCTGTCTCGAGGTAGAGGACGTAATCCAA
.... . . : * * . * . : * * .

clustalw.dnd

```
(
(
(
(
(
(
LR757995.1_Wuhanvirus:0.29013,
(
NC_004718.3_SARS_coronavirus:0.07805,
AY274119.3_SARS-related_coronavirus:0.07805)
:0.01682)
:0.00074,
MT192773.1_SARS-CoV-2/VNM:0.29176)
:0.00042,
MN988713.1_Wuhanvirus:0.29208)
:0.00025,
MT192772.1_SARS-CoV-2/VNM:0.29225)
:0.00000,
MT163720.1_SARS-CoV-2/USA:0.29244)
:0.00000,
(
(
(
(
LR757998.1_Wuhanvirus:0.29118,
(
MG772933.1_Bat_SARS-like_coronavirus:0.25961,
(
NC_014470.1_Bat_coronavirus:0.32730,
KU740200.1_MERS/Egypt:0.43598)
:0.09625)
:0.04382)
:0.00015,
MT012098.1_SARS-CoV-2/IND:0.29235)
:0.00000,
MN996528.1_SARS-CoV-2/VNM:0.29241)
:0.00000,
MN996529.1_SARS-CoV-2/CHN:0.29245)
:0.00000,
MT163716.1_SARS-CoV-2/USA:0.29245);
```

Select tree menu ▼

Exec