

FAO World Reference Laboratory for Foot-and-Mouth Disease (WRLFMD)

Genotyping Report

FMDV serotype: A
Country: Iran
Year: 2018
Batch: WRLFMD/2018/00007
No. of sequences: 10
Report date: 9th April 2018
Report generated by: Nick Knowles
Report checked by: Kasia Bankowska



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www: <http://www.wrlfmd.org/>

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| | |
|---|-------------------------------|
| Virus sample name: | IRN/4/2018a |
| Sender reference: | IR-96-75 |
| Location of origin: | Mirjaveh, Sistan & Bluchestan |
| Country of origin: | Iran |
| Date of collection: | 14/01/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 13/03/2018 |
| Primers: | A-1C562F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36054, genome 36055, sequence viba_36056, sequencing info 36057 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_36048 | IRN/23/2018 | cattle | 99.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36032 | IRN/6/2018 | cattle | 99.5 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36060 | IRN/4/2018b | cattle | 99.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36024 | IRN/2/2018 | cattle | 99.2 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34401 | AFG/6/2017 | cattle | 96.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34405 | AFG/10/2017 | cattle | 96.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34421 | AFG/25/2017 | cattle | 96.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34393 | AFG/3/2017 | cattle | 96.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_22406 | PAK/8/2014 | water buffalo | 94.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_20947 | IRN/28/2013 | cattle | 94.8 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 94.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_636 | IRN/78/2009 | | 91.8 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_331 | AFG/10/2010 | | 91.6 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_414 | AFG/6/2007 | bovine | 91.3 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 91.2 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_10508 | PAK/7/2008 | water buffalo | 91.0 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_557 | IRN/15/2012 | bovine | 90.7 | 0 | A | ASIA | Iran-05 | SIS-12 |
| viba_594 | IRN/1/2011 | bovine | 90.5 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_319 | BAR/6/2008 | bovine | 90.4 | 0 | A | ASIA | Iran-05 | BAR-08 |
| viba_34575 | BAD/AFG/L2814/2009 | cattle | 90.1 | 0 | A | ASIA | Iran-05 | BAD-09 |

| | |
|---|-------------------------------|
| Virus sample name: | IRN/4/2018b |
| Sender reference: | IR-96-75 |
| Location of origin: | Mirjaveh, Sistan & Bluchestan |
| Country of origin: | Iran |
| Date of collection: | 14/01/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 13/03/2018 |
| Primers: | A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36058, genome 36059, sequence viba_36060, sequencing info 36061 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_36032 | IRN/6/2018 | cattle | 99.5 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36056 | IRN/4/2018a | cattle | 99.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36048 | IRN/23/2018 | cattle | 99.1 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36024 | IRN/2/2018 | cattle | 98.6 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34401 | AFG/6/2017 | cattle | 96.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34405 | AFG/10/2017 | cattle | 96.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34421 | AFG/25/2017 | cattle | 96.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34393 | AFG/3/2017 | cattle | 96.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_22406 | PAK/8/2014 | water buffalo | 94.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_20947 | IRN/28/2013 | cattle | 94.8 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 94.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_636 | IRN/78/2009 | | 91.8 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_331 | AFG/10/2010 | | 91.6 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_414 | AFG/6/2007 | bovine | 91.6 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 91.2 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_10508 | PAK/7/2008 | water buffalo | 91.0 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_557 | IRN/15/2012 | bovine | 90.7 | 0 | A | ASIA | Iran-05 | SIS-12 |
| viba_594 | IRN/1/2011 | bovine | 90.7 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_34575 | BAD/AFG/L2814/2009 | cattle | 90.4 | 0 | A | ASIA | Iran-05 | BAD-09 |
| viba_319 | BAR/6/2008 | bovine | 90.4 | 0 | A | ASIA | Iran-05 | BAR-08 |

| | |
|---|--------------------|
| Virus sample name: | IRN/2/2018 |
| Sender reference: | IR-96-73 |
| Location of origin: | Kerman, Kerman |
| Country of origin: | Iran |
| Date of collection: | 06/01/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 13/03/2018 |
| Primers: | A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36022, genome 36023, sequence viba_36024, sequencing info 36025 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_36056 | IRN/4/2018a | cattle | 99.2 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36048 | IRN/23/2018 | cattle | 98.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36032 | IRN/6/2018 | cattle | 98.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36060 | IRN/4/2018b | cattle | 98.6 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34401 | AFG/6/2017 | cattle | 96.1 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34405 | AFG/10/2017 | cattle | 95.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34421 | AFG/25/2017 | cattle | 95.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34393 | AFG/3/2017 | cattle | 95.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_22406 | PAK/8/2014 | water buffalo | 94.0 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_20947 | IRN/28/2013 | cattle | 94.0 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 94.0 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_636 | IRN/78/2009 | | 91.3 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_331 | AFG/10/2010 | | 91.2 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_414 | AFG/6/2007 | bovine | 90.8 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 90.7 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_10508 | PAK/7/2008 | water buffalo | 90.5 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_557 | IRN/15/2012 | bovine | 90.2 | 0 | A | ASIA | Iran-05 | SIS-12 |
| viba_403 | TUR/1/2008 | cattle | 90.0 | 0 | A | ASIA | Iran-05 | ARD-07 |
| viba_594 | IRN/1/2011 | bovine | 90.0 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_34575 | BAD/AFG/L2814/2009 | cattle | 90.0 | 0 | A | ASIA | Iran-05 | BAD-09 |

| | |
|---|--|
| Virus sample name: | IRN/3/2018 |
| Sender reference: | IR-96-67 |
| Location of origin: | Esfahan, Esfahan |
| Country of origin: | Iran |
| Date of collection: | 09/01/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 13/03/2018 |
| Primers: | A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36026, genome 36027, sequence viba_36028, sequencing info 36029 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|--------|-------|----------|----------|----------|---------|------------|
| viba_33587 | IRN/2/2017 | cattle | 99.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33579 | IRN/34/2016 | cattle | 99.1 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33595 | IRN/6/2017 | sheep | 98.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33603 | IRN/9/2017 | cattle | 98.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33611 | IRN/13/2017 | sheep | 98.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36044 | IRN/18/2018 | cattle | 98.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33607 | IRN/10/2017 | cattle | 98.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_35066 | PAK/3/2016 | cattle | 98.3 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_35098 | PAK/12/2017 | cattle | 98.3 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36040 | IRN/10/2018 | cattle | 98.1 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 95.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_331 | AFG/10/2010 | | 92.6 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_10508 | PAK/7/2008 | water buffalo | 92.4 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_636 | IRN/78/2009 | | 92.3 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_414 | AFG/6/2007 | bovine | 91.8 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_594 | IRN/1/2011 | bovine | 91.6 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_319 | BAR/6/2008 | bovine | 91.5 | 0 | A | ASIA | Iran-05 | BAR-08 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 91.3 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_34575 | BAD/AFG/L2814/2009 | cattle | 91.3 | 0 | A | ASIA | Iran-05 | BAD-09 |
| viba_791 | IRN/125/2010 | bovine | 90.8 | 0 | A | ASIA | Iran-05 | SIS-10 |

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|---|--|
| Virus sample name: | IRN/6/2018 |
| Sender reference: | IR-96-74 |
| Location of origin: | Rafsanjan, Kerman |
| Country of origin: | Iran |
| Date of collection: | 20/01/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 13/03/2018 |
| Primers: | A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36030, genome 36031, sequence viba_36032, sequencing info 36033 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_36060 | IRN/4/2018b | cattle | 99.5 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36056 | IRN/4/2018a | cattle | 99.5 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36048 | IRN/23/2018 | cattle | 99.2 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36024 | IRN/2/2018 | cattle | 98.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34401 | AFG/6/2017 | cattle | 97.0 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34405 | AFG/10/2017 | cattle | 96.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34421 | AFG/25/2017 | cattle | 96.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34393 | AFG/3/2017 | cattle | 96.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_22406 | PAK/8/2014 | water buffalo | 94.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_20947 | IRN/28/2013 | cattle | 94.9 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 94.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_636 | IRN/78/2009 | | 91.9 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_331 | AFG/10/2010 | | 91.8 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_414 | AFG/6/2007 | bovine | 91.5 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_10508 | PAK/7/2008 | water buffalo | 91.2 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 91.0 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_557 | IRN/15/2012 | bovine | 90.8 | 0 | A | ASIA | Iran-05 | SIS-12 |
| viba_594 | IRN/1/2011 | bovine | 90.7 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_34575 | BAD/AFG/L2814/2009 | cattle | 90.6 | 0 | A | ASIA | Iran-05 | BAD-09 |
| viba_319 | BAR/6/2008 | bovine | 90.5 | 0 | A | ASIA | Iran-05 | BAR-08 |

| | |
|---|--|
| Virus sample name: | IRN/9/2018 |
| Sender reference: | IR-96-69 |
| Location of origin: | Nazarabad, Alborz |
| Country of origin: | Iran |
| Date of collection: | 24/01/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | G-VII |
| Sublineage: | |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 13/03/2018 |
| Primers: | A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36034, genome 36035, sequence viba_36036, sequencing info 36037 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|------------------|--------|-------|----------|----------|----------|---------|------------|
| viba_36052 | IRN/25/2018 | cattle | 100.0 | 0 | A | ASIA | G-VII | |
| viba_33591 | IRN/4/2017 | cattle | 98.6 | 0 | A | ASIA | G-VII | |
| viba_25854 | IRN/25/2015 | cattle | 97.9 | 0 | A | ASIA | G-VII | |
| viba_25140 | ARM/2/2015 | cattle | 97.9 | 0 | A | ASIA | G-VII | |
| viba_25818 | IRN/12/2015 | cattle | 97.9 | 0 | A | ASIA | G-VII | |
| viba_25144 | ARM/3/2015 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_32136 | TUR/175/2015.712 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_25136 | ARM/1/2015 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_32140 | TUR/198/2015.808 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_27649 | IRN/20/2016 | cattle | 97.6 | 0 | A | ASIA | G-VII | |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|----------------|--------|-------|----------|----------|----------|---------|------------|
| viba_864 | IND/40/2000 | cattle | 90.6 | 0 | A | ASIA | G-VII | |
| viba_843 | SAU/16/95 | | 90.1 | 0 | A | ASIA | G-VII | |
| viba_336 | IRN/1/96 | bovine | 84.3 | 1 | A | ASIA | Iran-96 | |
| viba_677 | IRQ/24/64 | bovine | 84.0 | 0 | A | ASIA | A22 | |
| viba_682 | IRN/2/87 | bovine | 83.4 | 0 | A | ASIA | Iran-87 | |
| viba_699 | UKG/119/32 | | 83.1 | 0 | A | EURO-SA | A12 | |
| viba_475 | IRN/22/99 | | 83.0 | 0 | A | ASIA | Iran-99 | |
| viba_589 | Bangkok/TAI/60 | | 82.6 | 0 | A | ASIA | A15 | |
| viba_308 | IRN/9/2011 | bovine | 82.6 | 0 | A | ASIA | Iran-05 | QAZ-11 |
| viba_20943 | IRN/27/2013 | cattle | 82.2 | 0 | A | ASIA | Iran-05 | SIS-13 |

| | |
|---|--|
| Virus sample name: | IRN/10/2018 |
| Sender reference: | IR-96-77 |
| Location of origin: | Abyek, Qazvin |
| Country of origin: | Iran |
| Date of collection: | 25/01/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 13/03/2018 |
| Primers: | A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36038, genome 36039, sequence viba_36040, sequencing info 36041 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|--------|-------|----------|----------|----------|---------|------------|
| viba_33587 | IRN/2/2017 | cattle | 98.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36044 | IRN/18/2018 | cattle | 98.6 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33579 | IRN/34/2016 | cattle | 98.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33595 | IRN/6/2017 | sheep | 98.3 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33603 | IRN/9/2017 | cattle | 98.3 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33611 | IRN/13/2017 | sheep | 98.3 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36028 | IRN/3/2018 | cattle | 98.1 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33607 | IRN/10/2017 | cattle | 97.8 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_35066 | PAK/3/2016 | cattle | 97.6 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_35098 | PAK/12/2017 | cattle | 97.6 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 95.3 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_636 | IRN/78/2009 | | 91.9 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_10508 | PAK/7/2008 | water buffalo | 91.8 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_331 | AFG/10/2010 | | 91.6 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_414 | AFG/6/2007 | bovine | 91.2 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_594 | IRN/1/2011 | bovine | 91.0 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 90.9 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_319 | BAR/6/2008 | bovine | 90.8 | 0 | A | ASIA | Iran-05 | BAR-08 |
| viba_34575 | BAD/AFG/L2814/2009 | cattle | 90.3 | 0 | A | ASIA | Iran-05 | BAD-09 |
| viba_403 | TUR/1/2008 | cattle | 90.2 | 0 | A | ASIA | Iran-05 | ARD-07 |

| | |
|---|--|
| Virus sample name: | IRN/18/2018 |
| Sender reference: | IR-96-84 |
| Location of origin: | Oskou, West Azerbaijan |
| Country of origin: | Iran |
| Date of collection: | 01/02/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 15/03/2018; BTy2 |
| Harvest date of material: | 17/03/2018 |
| Primers: | A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36042, genome 36043, sequence viba_36044, sequencing info 36045 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|--------|-------|----------|----------|----------|---------|------------|
| viba_33587 | IRN/2/2017 | cattle | 99.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33603 | IRN/9/2017 | cattle | 99.2 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33579 | IRN/34/2016 | cattle | 99.1 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33595 | IRN/6/2017 | sheep | 98.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33611 | IRN/13/2017 | sheep | 98.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36028 | IRN/3/2018 | cattle | 98.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36040 | IRN/10/2018 | cattle | 98.6 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_33607 | IRN/10/2017 | cattle | 98.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_35066 | PAK/3/2016 | cattle | 98.3 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_35098 | PAK/12/2017 | cattle | 98.3 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-----------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 95.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_10508 | PAK/7/2008 | water buffalo | 92.7 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_636 | IRN/78/2009 | | 92.3 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_331 | AFG/10/2010 | | 92.3 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_414 | AFG/6/2007 | bovine | 92.1 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_594 | IRN/1/2011 | bovine | 92.0 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_319 | BAR/6/2008 | bovine | 91.6 | 0 | A | ASIA | Iran-05 | BAR-08 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 91.3 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_403 | TUR/1/2008 | cattle | 91.2 | 0 | A | ASIA | Iran-05 | ARD-07 |
| viba_133 | IRN/1/2005 | cattle | 91.2 | 0 | A | ASIA | Iran-05 | |

| | |
|---|-------------------------|
| Virus sample name: | IRN/23/2018 |
| Sender reference: | IR-96-81 |
| Location of origin: | BirJand, South Khorasan |
| Country of origin: | Iran |
| Date of collection: | 12/02/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | Iran-05 |
| Sublineage: | SIS-13 |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 15/03/2018 |
| Primers: | A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36046, genome 36047, sequence viba_36048, sequencing info 36049 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_36056 | IRN/4/2018a | cattle | 99.7 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36032 | IRN/6/2018 | cattle | 99.2 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36060 | IRN/4/2018b | cattle | 99.1 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_36024 | IRN/2/2018 | cattle | 98.9 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34401 | AFG/6/2017 | cattle | 96.5 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34405 | AFG/10/2017 | cattle | 96.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34421 | AFG/25/2017 | cattle | 96.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_34393 | AFG/3/2017 | cattle | 96.4 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_22406 | PAK/8/2014 | water buffalo | 94.5 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_20947 | IRN/28/2013 | cattle | 94.5 | 0 | A | ASIA | Iran-05 | SIS-13 |

Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------------|---------------|-------|----------|----------|----------|---------|------------|
| viba_20943 | IRN/27/2013 | cattle | 94.5 | 0 | A | ASIA | Iran-05 | SIS-13 |
| viba_331 | AFG/10/2010 | | 91.6 | 0 | A | ASIA | Iran-05 | HER-10 |
| viba_636 | IRN/78/2009 | | 91.5 | 0 | A | ASIA | Iran-05 | FAR-09 |
| viba_414 | AFG/6/2007 | bovine | 91.3 | 0 | A | ASIA | Iran-05 | AFG-07 |
| viba_34671 | BAL/PAK/05/2011 | cattle | 91.2 | 0 | A | ASIA | Iran-05 | BAL-11 |
| viba_10508 | PAK/7/2008 | water buffalo | 91.0 | 0 | A | ASIA | Iran-05 | SIN-08 |
| viba_557 | IRN/15/2012 | bovine | 90.7 | 0 | A | ASIA | Iran-05 | SIS-12 |
| viba_594 | IRN/1/2011 | bovine | 90.5 | 0 | A | ASIA | Iran-05 | FAR-11 |
| viba_319 | BAR/6/2008 | bovine | 90.4 | 0 | A | ASIA | Iran-05 | BAR-08 |
| viba_34575 | BAD/AFG/L2814/2009 | cattle | 90.1 | 0 | A | ASIA | Iran-05 | BAD-09 |

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|---|--|
| Virus sample name: | IRN/25/2018 |
| Sender reference: | IR-96-72 |
| Location of origin: | Bokan, East Azerbaijan |
| Country of origin: | Iran |
| Date of collection: | 23/02/2018 |
| Host species: | cattle |
| Serotype: | A |
| Topotype: | ASIA |
| Lineage: | G-VII |
| Sublineage: | |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | BTy1 |
| Harvest date of material: | 15/03/2018 |
| Primers: | A-1C562F/EUR-2B52R; A-1C612F/EUR-2B52R |
| Received for sequencing: | 03/04/2018 |
| Created: | 05/04/2018 |
| Last updated: | 05/04/2018 |
| VIBASys IDs: sample 36050, genome 36051, sequence viba_36052, sequencing info 36053 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|------------------|--------|-------|----------|----------|----------|---------|------------|
| viba_36036 | IRN/9/2018 | cattle | 100.0 | 0 | A | ASIA | G-VII | |
| viba_33591 | IRN/4/2017 | cattle | 98.6 | 0 | A | ASIA | G-VII | |
| viba_25854 | IRN/25/2015 | cattle | 97.9 | 0 | A | ASIA | G-VII | |
| viba_25140 | ARM/2/2015 | cattle | 97.9 | 0 | A | ASIA | G-VII | |
| viba_25818 | IRN/12/2015 | cattle | 97.9 | 0 | A | ASIA | G-VII | |
| viba_25144 | ARM/3/2015 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_32136 | TUR/175/2015.712 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_25136 | ARM/1/2015 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_32140 | TUR/198/2015.808 | cattle | 97.8 | 0 | A | ASIA | G-VII | |
| viba_27649 | IRN/20/2016 | cattle | 97.6 | 0 | A | ASIA | G-VII | |

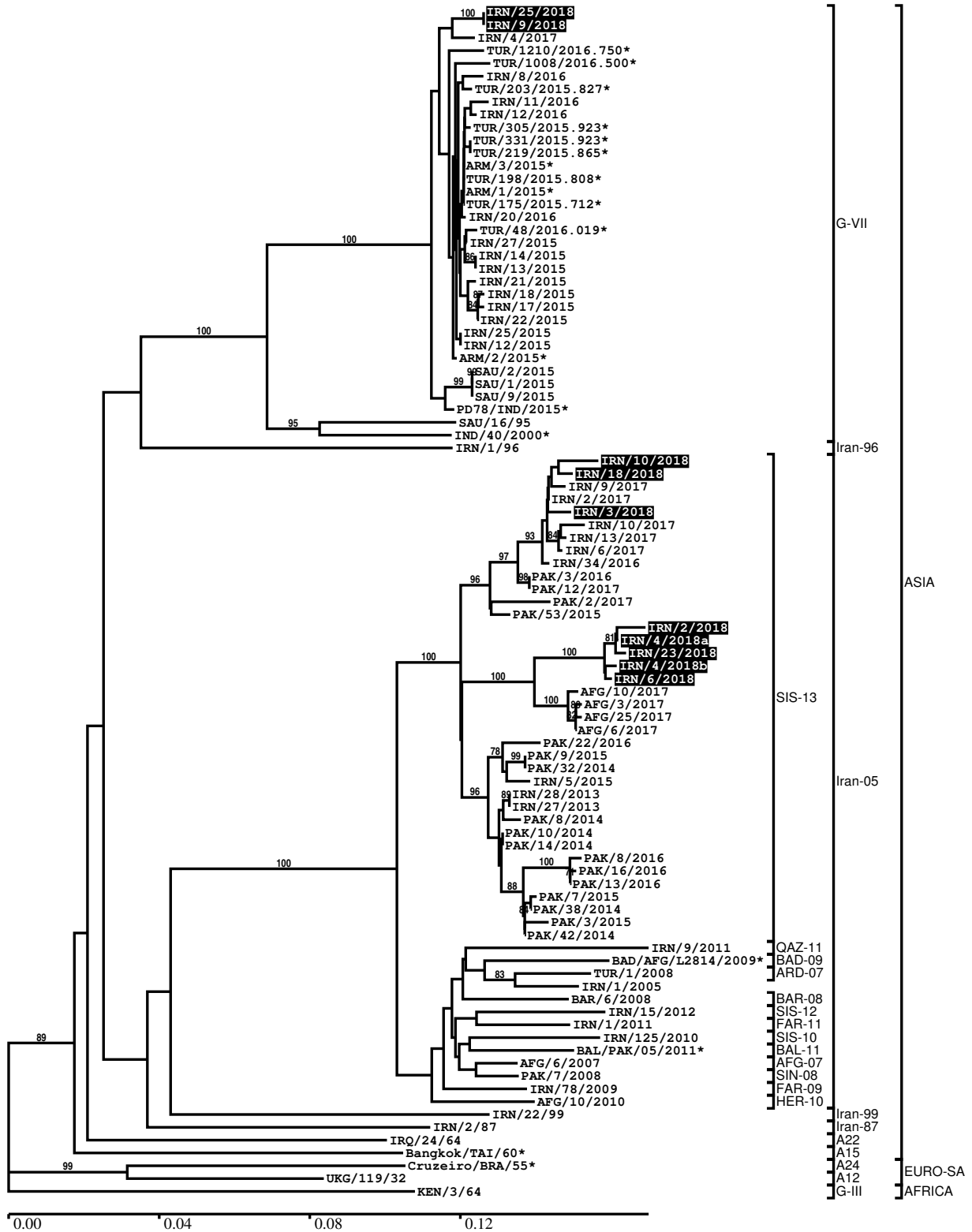
Most Closely Related Prototype Sequences

see http://www.wrlfmd.org/fmd_genotyping/prototypes.htm

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|----------------|--------|-------|----------|----------|----------|---------|------------|
| viba_864 | IND/40/2000 | cattle | 90.6 | 0 | A | ASIA | G-VII | |
| viba_843 | SAU/16/95 | | 90.1 | 0 | A | ASIA | G-VII | |
| viba_336 | IRN/1/96 | bovine | 84.3 | 1 | A | ASIA | Iran-96 | |
| viba_677 | IRQ/24/64 | bovine | 84.0 | 0 | A | ASIA | A22 | |
| viba_682 | IRN/2/87 | bovine | 83.4 | 0 | A | ASIA | Iran-87 | |
| viba_699 | UKG/119/32 | | 83.1 | 0 | A | EURO-SA | A12 | |
| viba_475 | IRN/22/99 | | 83.0 | 0 | A | ASIA | Iran-99 | |
| viba_589 | Bangkok/TAI/60 | | 82.6 | 0 | A | ASIA | A15 | |
| viba_308 | IRN/9/2011 | bovine | 82.6 | 0 | A | ASIA | Iran-05 | QAZ-11 |
| viba_20943 | IRN/27/2013 | cattle | 82.2 | 0 | A | ASIA | Iran-05 | SIS-13 |

Report on FMDV A in Iran in 2018

Batch: WRLFMD/2018/00007



*, not a WRLFMD Reference Number

Analysis Parameters

VP1 subsequence extractor: vp1_A
 Query sequence set: WRLFMD/2018/00007-Iran-A (10 sequences)
 Sequence database set: allseqs_A (1813 sequences)
 Prototype sequence set: !prototypes_A (40 sequences)
 Number of related sequences reported: 10
 Minimal VP1 subsequence match length: 600
 Sequence alignment method: muscle (default parameters)
 Sequence alignment length: 633
 Phylogeny reconstruction method: fdnadist, fneighbor
 Number of bootstrap samples: 1000
 Random seed for bootstrapping: 1
 Displaying bootstrap values above: 70.0%
 Number of sequences in tree capped at: 100
 Number of prototype sequences in tree: 22
 VIBASys version: reflabs-1.1.2

Sequences in the Phylogenetic Tree

All sequences in the tree are in taxonomic group FMDV/A

| label | accession | host(s) | lab | country | taxonomic information |
|--------------------|-----------|---------|--------|--------------|-----------------------|
| IRN/25/2018 | n/a | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/9/2018 | n/a | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/4/2017 | n/a | cattle | WRLFMD | Iran | ASIA/G-VII |
| TUR/1210/2016.750* | KY982330 | cattle | FMDI | Turkey | ASIA/G-VII |
| TUR/1008/2016.500* | KY982328 | cattle | FMDI | Turkey | ASIA/G-VII |
| IRN/8/2016 | KY982293 | cattle | WRLFMD | Iran | ASIA/G-VII |
| TUR/203/2015.827* | KY982323 | cattle | FMDI | Turkey | ASIA/G-VII |
| IRN/11/2016 | KY982294 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/12/2016 | KY982295 | cattle | WRLFMD | Iran | ASIA/G-VII |
| TUR/305/2015.923* | KY982325 | cattle | FMDI | Turkey | ASIA/G-VII |
| TUR/331/2015.923* | KY982326 | cattle | FMDI | Turkey | ASIA/G-VII |
| TUR/219/2015.865* | KY982324 | cattle | FMDI | Turkey | ASIA/G-VII |
| ARM/3/2015* | KY982281 | cattle | ARRIAH | Armenia | ASIA/G-VII |
| TUR/198/2015.808* | KY982322 | cattle | FMDI | Turkey | ASIA/G-VII |
| ARM/1/2015* | KY982279 | cattle | ARRIAH | Armenia | ASIA/G-VII |
| TUR/175/2015.712* | KY982321 | cattle | FMDI | Turkey | ASIA/G-VII |
| IRN/20/2016 | KY982296 | cattle | WRLFMD | Iran | ASIA/G-VII |
| TUR/48/2016.019* | KY982327 | sheep | FMDI | Turkey | ASIA/G-VII |
| IRN/27/2015 | KY982291 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/14/2015 | KY982285 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/13/2015 | KY982284 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/21/2015 | KY982288 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/18/2015 | KY982287 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/17/2015 | KY982286 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/22/2015 | KY982289 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/25/2015 | KY982290 | cattle | WRLFMD | Iran | ASIA/G-VII |
| IRN/12/2015 | KY982283 | cattle | WRLFMD | Iran | ASIA/G-VII |
| ARM/2/2015* | KY982280 | cattle | ARRIAH | Armenia | ASIA/G-VII |
| SAU/2/2015 | KY982298 | cattle | WRLFMD | Saudi Arabia | ASIA/G-VII |
| SAU/1/2015 | KU127247 | cattle | WRLFMD | Saudi Arabia | ASIA/G-VII |
| SAU/9/2015 | KY982305 | bovine | WRLFMD | Saudi Arabia | ASIA/G-VII |
| PD78/IND/2015* | n/a | n/a | PD-FMD | India | ASIA/G-VII |
| SAU/16/95 | EU553874 | n/a | WRLFMD | Saudi Arabia | ASIA/G-VII |
| IND/40/2000* | AF390646 | cattle | PD-FMD | India | ASIA/G-VII |
| IRN/1/96 | EF208771 | bovine | WRLFMD | Iran | ASIA/Iran-96 |
| IRN/10/2018 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |

continued on next page

| label | accession | host(s) | lab | country | taxonomic information |
|---------------------|-----------|---------------|---------------|----------------|-----------------------|
| IRN/18/2018 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/9/2017 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/2/2017 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/3/2018 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/10/2017 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/13/2017 | n/a | sheep | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/6/2017 | n/a | sheep | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/34/2016 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| PAK/3/2016 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/12/2017 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/2/2017 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/53/2015 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| IRN/2/2018 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/4/2018a | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/23/2018 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/4/2018b | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/6/2018 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| AFG/10/2017 | n/a | cattle | WRLFMD | Afghanistan | ASIA/Iran-05/SIS-13 |
| AFG/3/2017 | n/a | cattle | WRLFMD | Afghanistan | ASIA/Iran-05/SIS-13 |
| AFG/25/2017 | n/a | cattle | WRLFMD | Afghanistan | ASIA/Iran-05/SIS-13 |
| AFG/6/2017 | n/a | cattle | WRLFMD | Afghanistan | ASIA/Iran-05/SIS-13 |
| PAK/22/2016 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/9/2015 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/32/2014 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| IRN/5/2015 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/28/2013 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| IRN/27/2013 | n/a | cattle | WRLFMD | Iran | ASIA/Iran-05/SIS-13 |
| PAK/8/2014 | n/a | water buffalo | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/10/2014 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/14/2014 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/8/2016 | n/a | water buffalo | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/16/2016 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/13/2016 | n/a | water buffalo | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/7/2015 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/38/2014 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/3/2015 | n/a | cattle | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| PAK/42/2014 | n/a | water buffalo | WRLFMD | Pakistan | ASIA/Iran-05/SIS-13 |
| IRN/9/2011 | KY091295 | bovine | WRLFMD | Iran | ASIA/Iran-05/QAZ-11 |
| BAD/AFG/L2814/2009* | HQ439296 | cattle | LINDHOLM | Afghanistan | ASIA/Iran-05/BAD-09 |
| TUR/1/2008 | FJ755133 | cattle | WRLFMD | Turkey | ASIA/Iran-05/ARD-07 |
| IRN/1/2005 | EF208769 | cattle | WRLFMD | Iran | ASIA/Iran-05 |
| BAR/6/2008 | FJ755010 | bovine | WRLFMD | Bahrain | ASIA/Iran-05/BAR-08 |
| IRN/15/2012 | KY091297 | bovine | WRLFMD | Iran | ASIA/Iran-05/SIS-12 |
| IRN/1/2011 | KY091292 | bovine | WRLFMD | Iran | ASIA/Iran-05/FAR-11 |
| IRN/125/2010 | KY091296 | bovine | WRLFMD | Iran | ASIA/Iran-05/SIS-10 |
| BAL/PAK/05/2011* | KT832824 | cattle | Univ Malakand | Pakistan | ASIA/Iran-05/BAL-11 |
| AFG/6/2007 | FJ755007 | bovine | WRLFMD | Afghanistan | ASIA/Iran-05/AFG-07 |
| PAK/7/2008 | n/a | water buffalo | WRLFMD | Pakistan | ASIA/Iran-05/SIN-08 |
| IRN/78/2009 | KY091291 | n/a | WRLFMD | Iran | ASIA/Iran-05/FAR-09 |
| AFG/10/2010 | KY091293 | n/a | WRLFMD | Afghanistan | ASIA/Iran-05/HER-10 |
| IRN/22/99 | EF208772 | n/a | WRLFMD | Iran | ASIA/Iran-99 |
| IRN/2/87 | EF208770 | bovine | WRLFMD | Iran | ASIA/Iran-87 |
| IRQ/24/64 | AY593763 | bovine | PIADC | Iraq | ASIA/A22 |
| Bangkok/TAI/60* | AY593755 | n/a | PIADC | Thailand | ASIA/A15 |
| Cruzeiro/BRA/55* | AY593768 | bovine | PIADC | Brazil | EURO-SA/A24 |
| UKG/119/32 | M10975 | n/a | PIADC | United Kingdom | EURO-SA/A12 |
| KEN/3/64 | AY593761 | n/a | PIADC | Kenya | AFRICA/G-III |

*, not a WRLFMD Reference Number

n/a, not available