

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

Genotyping Report

FMDV serotype: O
Country: Thailand
Year: 2021
Batch: WRLMEG/2022/00014
No. of sequences: 8
Report date: 13th June 2022
Report generated by: Nick Knowles
Report checked by: Jemma Wadsworth



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

email: reporting@pirbright.ac.uk

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| | |
|---|--|
| Virus sample name: | TAI/2/21 |
| Sender reference: | 2/21 |
| Location of origin: | Nong Sarai, Pak Chong, Nakhon Ratchasima |
| Country of origin: | Thailand |
| Date of collection: | 14/01/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |
| VIBASys IDs: sample 50748, genome 50749, sequence viba_50750, sequencing info 50751 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|------------------|---------|-------|----------|----------|----------|----------|------------|
| viba_48194 | VIT/1/2021 | cattle | 99.5 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48033 | MAY/1388/2020 | cattle | 99.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48158 | VIT/20/2020 | porcine | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48146 | VIT/17/2020 | cattle | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48101 | MAY/4425/2020 | cattle | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48073 | MAY/4050/2020(2) | cattle | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48154 | VIT/19/2020 | | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48041 | MAY/3041/2020(1) | cattle | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47401 | VIT/11359/2020b | cattle | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48069 | MAY/3933/2020(3) | cattle | 99.2 | 0 | O | ME-SA | Ind-2001 | e |

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|--------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 95.6 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 93.7 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 90.9 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 90.5 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 89.4 | 0 | O | ME-SA | Ind-2001 | c |
| viba_766 | IRN/31/2009 | cattle | 88.2 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_285 | UKG/35/2001 | porcine | 87.7 | 0 | O | ME-SA | PanAsia | |
| viba_650 | IRN/8/2005 | ovine | 87.2 | 0 | O | ME-SA | PanAsia-2 | |
| viba_719 | IRN/88/2009 | | 87.0 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |
| viba_491 | TUR/257/2008 | | 86.9 | 0 | O | ME-SA | PanAsia-2 | TER-08 |

| | |
|---|--|
| Virus sample name: | TAI/4/21 |
| Sender reference: | 4/21 |
| Location of origin: | Pa Rakam, Pak Phanang, Nakhon Si Thammarat |
| Country of origin: | Thailand |
| Date of collection: | 12/03/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |
| VIBASys IDs: sample 50756, genome 50757, sequence viba_50758, sequencing info 50759 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-----------------|---------|-------|----------|----------|----------|----------|------------|
| viba_50754 | TAI/6/21 | bovine | 99.7 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48105 | MAY/877/2021(3) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47393 | VIT/11272/2020b | porcine | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48186 | VIT/27/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_50774 | TAI/43/21 | bovine | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48650 | MOG/3/2021 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48170 | VIT/23/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48113 | MAY/877/2021(6) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47397 | VIT/11359/2020a | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48109 | MAY/877/2021(5) | cattle | 98.9 | 0 | O | ME-SA | Ind-2001 | e |

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|---------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 95.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 93.0 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 90.9 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 89.9 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 89.3 | 0 | O | ME-SA | Ind-2001 | c |
| viba_766 | IRN/31/2009 | cattle | 88.6 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_285 | UKG/35/2001 | porcine | 88.2 | 0 | O | ME-SA | PanAsia | |
| viba_719 | IRN/88/2009 | cattle | 88.0 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |
| viba_650 | IRN/8/2005 | ovine | 87.6 | 0 | O | ME-SA | PanAsia-2 | |
| viba_359 | Manisa/TUR/69 | cattle | 87.5 | 0 | O | ME-SA | | |

| | |
|---|--------------------------------|
| Virus sample name: | TAI/6/21 |
| Sender reference: | 6/21 |
| Location of origin: | Khao Kham, Mueang Krabi, Krabi |
| Country of origin: | Thailand |
| Date of collection: | 09/03/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |
| VIBASys IDs: sample 50752, genome 50753, sequence viba_50754, sequencing info 50755 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-----------------|---------|-------|----------|----------|----------|----------|------------|
| viba_50758 | TAI/4/21 | bovine | 99.7 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48105 | MAY/877/2021(3) | cattle | 99.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_50774 | TAI/43/21 | bovine | 99.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48113 | MAY/877/2021(6) | cattle | 99.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48109 | MAY/877/2021(5) | cattle | 99.2 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47393 | VIT/11272/2020b | porcine | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48186 | VIT/27/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48650 | MOG/3/2021 | | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48170 | VIT/23/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47397 | VIT/11359/2020a | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|---------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 95.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 93.0 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 90.9 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 89.9 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 89.3 | 0 | O | ME-SA | Ind-2001 | c |
| viba_766 | IRN/31/2009 | cattle | 88.9 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_285 | UKG/35/2001 | porcine | 88.5 | 0 | O | ME-SA | PanAsia | |
| viba_719 | IRN/88/2009 | | 88.3 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |
| viba_650 | IRN/8/2005 | ovine | 87.9 | 0 | O | ME-SA | PanAsia-2 | |
| viba_359 | Manisa/TUR/69 | | 87.8 | 0 | O | ME-SA | | |

| | |
|---|---------------------------------|
| Virus sample name: | TAI/30/21 |
| Sender reference: | 30/21 |
| Location of origin: | Nong Yaeng, San Sai, Chiang Mai |
| Country of origin: | Thailand |
| Date of collection: | 05/10/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |
| VIBASys IDs: sample 50764, genome 50765, sequence viba_50766, sequencing info 50767 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------------|--------|-------|----------|----------|----------|----------|------------|
| viba_50613 | PVT-SP4/ISA/2022 | cattle | 96.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_50504 | VL6-J-T/ISA/2022 | | 96.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_50631 | PVT-S2AN/ISA/2022 | cattle | 96.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_50625 | PVT-S234/ISA/2022 | cattle | 96.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_50617 | PVT-SP10/ISA/2022 | cattle | 96.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_37185 | MAY/3/2018 | cattle | 95.6 | 0 | O | ME-SA | Ind-2001 | e |
| viba_37025 | XJ/CHA/2017 | cattle | 95.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_32124 | XJBC/CHA/2017 | | 95.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_37189 | MAY/4/2018 | cattle | 95.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_46431 | IND/PD287/2015 | cattle | 95.3 | 0 | O | ME-SA | Ind-2001 | e |

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|---------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 94.9 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 91.6 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 91.3 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 90.1 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 89.3 | 0 | O | ME-SA | Ind-2001 | c |
| viba_359 | Manisa/TUR/69 | | 88.0 | 0 | O | ME-SA | | |
| viba_650 | IRN/8/2005 | ovine | 87.7 | 0 | O | ME-SA | PanAsia-2 | |
| viba_766 | IRN/31/2009 | cattle | 87.7 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_491 | TUR/257/2008 | | 87.5 | 0 | O | ME-SA | PanAsia-2 | TER-08 |
| viba_719 | IRN/88/2009 | | 87.4 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |

| | |
|---|---------------------------|
| Virus sample name: | TAI/35/21 |
| Sender reference: | 35/21 |
| Location of origin: | Wiang, Thoeng, Chiang Rai |
| Country of origin: | Thailand |
| Date of collection: | 04/10/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |
| VIBASys IDs: sample 50760, genome 50761, sequence viba_50762, sequencing info 50763 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|------------------|---------|-------|----------|----------|----------|----------|------------|
| viba_50770 | TAI/36/21 | bovine | 100.0 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48146 | VIT/17/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48073 | MAY/4050/2020(2) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48041 | MAY/3041/2020(1) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48069 | MAY/3933/2020(3) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48037 | MAY/2081/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48045 | MAY/3245/2020(2) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48085 | MAY/4302/2020(1) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_44979 | VIT/25/2019 | porcine | 98.9 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47316 | TAI/4/2020 | cattle | 98.9 | 0 | O | ME-SA | Ind-2001 | e |

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 95.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 93.5 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 91.3 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 91.0 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 89.6 | 0 | O | ME-SA | Ind-2001 | c |
| viba_766 | IRN/31/2009 | cattle | 88.9 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_650 | IRN/8/2005 | ovine | 88.3 | 0 | O | ME-SA | PanAsia-2 | |
| viba_719 | IRN/88/2009 | | 88.2 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |
| viba_285 | UKG/35/2001 | porcine | 88.2 | 0 | O | ME-SA | PanAsia | |
| viba_666 | IRN/18/2010 | cattle | 87.7 | 0 | O | ME-SA | PanAsia-2 | BAL-09 |

| | |
|---|------------------------------------|
| Virus sample name: | TAI/36/21 |
| Sender reference: | 36/21 |
| Location of origin: | Mengrai, Phaya Mengrai, Chiang Rai |
| Country of origin: | Thailand |
| Date of collection: | 07/10/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |
| VIBASys IDs: sample 50768, genome 50769, sequence viba_50770, sequencing info 50771 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|------------------|---------|-------|----------|----------|----------|----------|------------|
| viba_50762 | TAI/35/21 | bovine | 100.0 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48146 | VIT/17/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48073 | MAY/4050/2020(2) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48041 | MAY/3041/2020(1) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48069 | MAY/3933/2020(3) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48037 | MAY/2081/2020 | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48045 | MAY/3245/2020(2) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48085 | MAY/4302/2020(1) | cattle | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_44979 | VIT/25/2019 | porcine | 98.9 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47316 | TAI/4/2020 | cattle | 98.9 | 0 | O | ME-SA | Ind-2001 | e |

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 95.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 93.5 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 91.3 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 91.0 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 89.6 | 0 | O | ME-SA | Ind-2001 | c |
| viba_766 | IRN/31/2009 | cattle | 88.9 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_650 | IRN/8/2005 | ovine | 88.3 | 0 | O | ME-SA | PanAsia-2 | |
| viba_719 | IRN/88/2009 | | 88.2 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |
| viba_285 | UKG/35/2001 | porcine | 88.2 | 0 | O | ME-SA | PanAsia | |
| viba_666 | IRN/18/2010 | cattle | 87.7 | 0 | O | ME-SA | PanAsia-2 | BAL-09 |

| | |
|---|-------------------------------|
| Virus sample name: | TAI/43/21 |
| Sender reference: | 43/21 |
| Location of origin: | Don Pao, Mae Wang, Chiang Mai |
| Country of origin: | Thailand |
| Date of collection: | 15/10/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |
| VIBASys IDs: sample 50772, genome 50773, sequence viba_50774, sequencing info 50775 | |

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|-----------------|---------|-------|----------|----------|----------|----------|------------|
| viba_50754 | TAI/6/21 | bovine | 99.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_50758 | TAI/4/21 | bovine | 99.1 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48105 | MAY/877/2021(3) | cattle | 98.7 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48113 | MAY/877/2021(6) | cattle | 98.7 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48109 | MAY/877/2021(5) | cattle | 98.6 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47393 | VIT/11272/2020b | porcine | 98.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48186 | VIT/27/2020 | cattle | 98.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48650 | MOG/3/2021 | | 98.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48170 | VIT/23/2020 | cattle | 98.4 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47397 | VIT/11359/2020a | cattle | 98.4 | 0 | O | ME-SA | Ind-2001 | e |

Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|---------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 94.8 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 92.4 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 90.2 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 89.3 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 88.7 | 0 | O | ME-SA | Ind-2001 | c |
| viba_766 | IRN/31/2009 | cattle | 88.3 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_719 | IRN/88/2009 | | 88.0 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |
| viba_285 | UKG/35/2001 | porcine | 87.9 | 0 | O | ME-SA | PanAsia | |
| viba_650 | IRN/8/2005 | ovine | 87.3 | 0 | O | ME-SA | PanAsia-2 | |
| viba_359 | Manisa/TUR/69 | | 87.2 | 0 | O | ME-SA | | |

| | |
|------------------------------------|--|
| Virus sample name: | TAI/60/21 |
| Sender reference: | 60/21 |
| Location of origin: | Phatthana Nikhom, Phatthana Nikhom, Lop Buri |
| Country of origin: | Thailand |
| Date of collection: | 17/11/2021 |
| Host species: | bovine |
| Serotype: | O |
| Topotype: | ME-SA |
| Lineage: | Ind-2001 |
| Sublineage: | e |
| Sequence length: | 633 |
| Ambiguities: | 0 |
| Material submitted for sequencing: | n/a |
| Harvest date of material: | n/a |
| Primers: | n/a |
| Received for sequencing: | n/a |
| Created: | 13/06/2022 |
| Last updated: | 13/06/2022 |

VIBASys IDs: sample 50776, genome 50777, sequence viba_50778, sequencing info 50779

Most Closely Related Sequences

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|----------------|---------------|-------|----------|----------|----------|----------|------------|
| viba_44979 | VIT/25/2019 | porcine | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47316 | TAI/4/2020 | cattle | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_44967 | VIT/17/2019 | porcine | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_48005 | MAY/35/2020(2) | cattle | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47287 | LAO/2/2020 | cattle | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_44987 | VIT/28/2019 | water buffalo | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_45022 | VIT/7/2020 | porcine | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47291 | LAO/3/2020 | cattle | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47299 | LAO/5/2020 | cattle | 97.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_47295 | LAO/4/2020 | cattle | 97.3 | 0 | O | ME-SA | Ind-2001 | e |

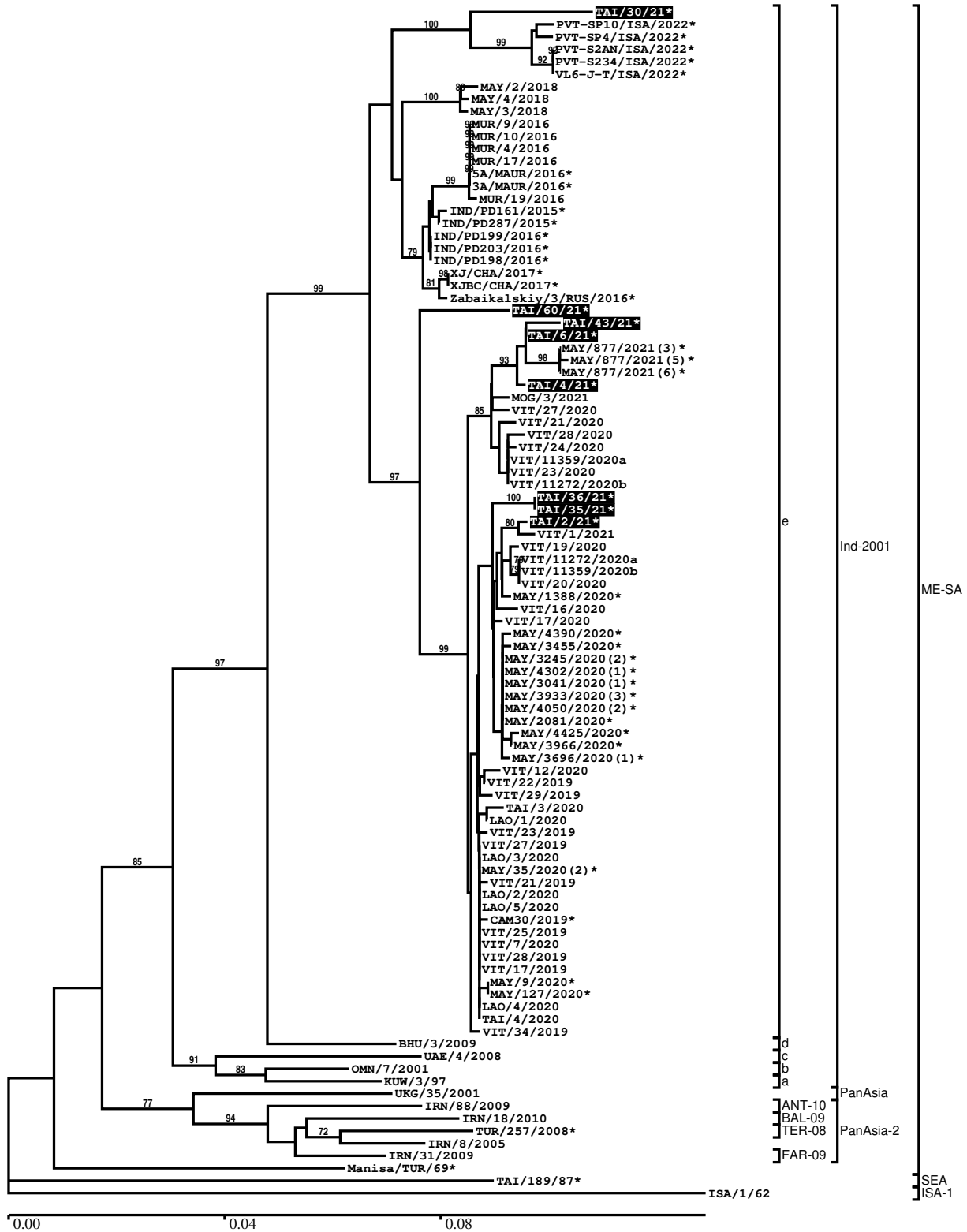
Most Closely Related Prototype Sequences

see <http://www.wrlfmd.org/fmdv-genome/fmd-prototype-strains>

| sequence | virus name | Host | % Id. | # Ambig. | serotype | topotype | lineage | sublineage |
|------------|---------------|---------|-------|----------|----------|----------|-----------|------------|
| viba_30238 | MUR/19/2016 | cattle | 95.3 | 0 | O | ME-SA | Ind-2001 | e |
| viba_293 | BHU/3/2009 | cattle | 93.5 | 0 | O | ME-SA | Ind-2001 | d |
| viba_541 | OMN/7/2001 | bovine | 91.3 | 0 | O | ME-SA | Ind-2001 | b |
| viba_705 | KUW/3/97 | bovine | 90.9 | 0 | O | ME-SA | Ind-2001 | a |
| viba_397 | UAE/4/2008 | gazelle | 89.9 | 0 | O | ME-SA | Ind-2001 | c |
| viba_766 | IRN/31/2009 | cattle | 88.6 | 0 | O | ME-SA | PanAsia-2 | FAR-09 |
| viba_719 | IRN/88/2009 | | 87.9 | 0 | O | ME-SA | PanAsia-2 | ANT-10 |
| viba_285 | UKG/35/2001 | porcine | 87.9 | 0 | O | ME-SA | PanAsia | |
| viba_359 | Manisa/TUR/69 | | 87.7 | 0 | O | ME-SA | | |
| viba_650 | IRN/8/2005 | ovine | 87.5 | 0 | O | ME-SA | PanAsia-2 | |

Report on FMDV O in Thailand in 2021

Batch: WRLMEG/2022/00014



*, not a WRLFMD Reference Number

Analysis Parameters

| | |
|--|--|
| VP1 subsequence extractor: | vp1_O |
| Query sequence set: | WRLMEG/2022/00014-Thailand-O (8 sequences) |
| Sequence database set: | allseqs_O (5604 sequences) |
| Prototype sequence set: | !prototypes_O (49 sequences) |
| Number of related sequences reported: | 10 |
| Minimal VP1 subsequence match length | 600 |
| Sequence alignment method: | muscle (default parameters) |
| Sequence alignment length: | 636 |
| 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: | 12 |
| VIBASys version: | reflabs-1.1.2 |

Sequences in the Phylogenetic Tree

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

| label | accession | host(s) | lab | country | taxonomic information |
|--------------------------|-----------|---------------|----------|-----------|-----------------------|
| TAI/30/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| PVT-SP10/ISA/2022* | n/a | cattle | Pusvetma | Indonesia | ME-SA/Ind-2001/e |
| PVT-SP4/ISA/2022* | n/a | cattle | Pusvetma | Indonesia | ME-SA/Ind-2001/e |
| PVT-S2AN/ISA/2022* | n/a | cattle | Pusvetma | Indonesia | ME-SA/Ind-2001/e |
| PVT-S234/ISA/2022* | n/a | cattle | Pusvetma | Indonesia | ME-SA/Ind-2001/e |
| VL6-J-T/ISA/2022* | n/a | n/a | Pusvetma | Indonesia | ME-SA/Ind-2001/e |
| MAY/2/2018 | n/a | cattle | WRLFMD | Malaysia | ME-SA/Ind-2001/e |
| MAY/4/2018 | n/a | cattle | WRLFMD | Malaysia | ME-SA/Ind-2001/e |
| MAY/3/2018 | n/a | cattle | WRLFMD | Malaysia | ME-SA/Ind-2001/e |
| MUR/9/2016 | MG972501 | cattle | WRLFMD | Mauritius | ME-SA/Ind-2001/e |
| MUR/10/2016 | MG972502 | cattle | WRLFMD | Mauritius | ME-SA/Ind-2001/e |
| MUR/4/2016 | MG972496 | cattle | WRLFMD | Mauritius | ME-SA/Ind-2001/e |
| MUR/17/2016 | MG972508 | cattle | WRLFMD | Mauritius | ME-SA/Ind-2001/e |
| 5A/MAUR/2016* | n/a | bovine | ANSES | Mauritius | ME-SA/Ind-2001/e |
| 3A/MAUR/2016* | n/a | bovine | ANSES | Mauritius | ME-SA/Ind-2001/e |
| MUR/19/2016 | MG972510 | cattle | WRLFMD | Mauritius | ME-SA/Ind-2001/e |
| IND/PD161/2015* | MT909637 | cattle | PD-FMD | India | ME-SA/Ind-2001/e |
| IND/PD287/2015* | MT909659 | cattle | PD-FMD | India | ME-SA/Ind-2001/e |
| IND/PD199/2016* | MT909673 | cattle | PD-FMD | India | ME-SA/Ind-2001/e |
| IND/PD203/2016* | MT909674 | cattle | PD-FMD | India | ME-SA/Ind-2001/e |
| IND/PD198/2016* | MT909672 | cattle | PD-FMD | India | ME-SA/Ind-2001/e |
| XJ/CHA/2017* | MF461724 | cattle | LVRI | China | ME-SA/Ind-2001/e |
| XJBC/CHA/2017* | KY696708 | n/a | LVRI | China | ME-SA/Ind-2001/e |
| Zabaikalskiy/3/RUS/2016* | MG972584 | cattle | ARRIAH | Russia | ME-SA/Ind-2001/e |
| TAI/60/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| TAI/43/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| TAI/6/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| MAY/877/2021(3)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/877/2021(5)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/877/2021(6)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| TAI/4/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| MOG/3/2021 | n/a | n/a | WRLFMD | Mongolia | ME-SA/Ind-2001/e |
| VIT/27/2020 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/21/2020 | n/a | water buffalo | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/28/2020 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/24/2020 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |

continued on next page

| label | accession | host(s) | lab | country | taxonomic information |
|-------------------|-----------|---------------|-------------|----------------------|------------------------|
| VIT/11359/2020a | n/a | cattle | RAHO6 | Vietnam | ME-SA/Ind-2001/e |
| VIT/23/2020 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/11272/2020b | n/a | porcine | RAHO6 | Vietnam | ME-SA/Ind-2001/e |
| TAI/36/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| TAI/35/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| TAI/2/21* | n/a | bovine | TRRL | Thailand | ME-SA/Ind-2001/e |
| VIT/1/2021 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/19/2020 | n/a | n/a | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/11272/2020a | n/a | porcine | RAHO6 | Vietnam | ME-SA/Ind-2001/e |
| VIT/11359/2020b | n/a | cattle | RAHO6 | Vietnam | ME-SA/Ind-2001/e |
| VIT/20/2020 | n/a | porcine | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| MAY/1388/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| VIT/16/2020 | n/a | water buffalo | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/17/2020 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| MAY/4390/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/3455/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/3245/2020(2)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/4302/2020(1)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/3041/2020(1)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/3933/2020(3)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/4050/2020(2)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/2081/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/4425/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/3966/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/3696/2020(1)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| VIT/12/2020 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/22/2019 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/29/2019 | n/a | water buffalo | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| TAI/3/2020 | n/a | cattle | WRLFMD | Thailand | ME-SA/Ind-2001/e |
| LAO/1/2020 | n/a | cattle | WRLFMD | Laos | ME-SA/Ind-2001/e |
| VIT/23/2019 | n/a | water buffalo | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/27/2019 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| LAO/3/2020 | n/a | cattle | WRLFMD | Laos | ME-SA/Ind-2001/e |
| MAY/35/2020(2)* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| VIT/21/2019 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| LAO/2/2020 | n/a | cattle | WRLFMD | Laos | ME-SA/Ind-2001/e |
| LAO/5/2020 | n/a | cattle | WRLFMD | Laos | ME-SA/Ind-2001/e |
| CAM30/2019* | MZ634456 | cattle | APQA | Cambodia | ME-SA/Ind-2001/e |
| VIT/25/2019 | n/a | porcine | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/7/2020 | n/a | porcine | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/28/2019 | n/a | water buffalo | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| VIT/17/2019 | n/a | porcine | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| MAY/9/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| MAY/127/2020* | n/a | cattle | MNFMDL | Malaysia | ME-SA/Ind-2001/e |
| LAO/4/2020 | n/a | cattle | WRLFMD | Laos | ME-SA/Ind-2001/e |
| TAI/4/2020 | n/a | cattle | WRLFMD | Thailand | ME-SA/Ind-2001/e |
| VIT/34/2019 | n/a | cattle | WRLFMD | Vietnam | ME-SA/Ind-2001/e |
| BHU/3/2009 | KM921814 | cattle | WRLFMD | Bhutan | ME-SA/Ind-2001/d |
| UAE/4/2008 | KM921876 | gazelle | WRLFMD | United Arab Emirates | ME-SA/Ind-2001/c |
| OMN/7/2001 | DQ164941 | bovine | WRLFMD | Oman | ME-SA/Ind-2001/b |
| KUW/3/97 | DQ164904 | bovine | WRLFMD | Kuwait | ME-SA/Ind-2001/a |
| UKG/35/2001 | AJ539141 | porcine | PIADC | United Kingdom | ME-SA/PanAsia |
| IRN/88/2009 | KY091282 | n/a | WRLFMD | Iran | ME-SA/PanAsia-2/ANT-10 |
| IRN/18/2010 | KY091283 | cattle | WRLFMD | Iran | ME-SA/PanAsia-2/BAL-09 |
| TUR/257/2008* | n/a | n/a | FMDI-Ankara | Turkey | ME-SA/PanAsia-2/TER-08 |
| IRN/8/2005 | KY091281 | ovine | WRLFMD | Iran | ME-SA/PanAsia-2 |
| IRN/31/2009 | KY091284 | cattle | WRLFMD | Iran | ME-SA/PanAsia-2/FAR-09 |
| Manisa/TUR/69* | AY593823 | n/a | PIADC | Turkey | ME-SA |
| TAI/189/87* | KY091288 | bovine | TRRL | Thailand | SEA |
| ISA/1/62 | AJ303500 | n/a | WRLFMD | Indonesia | ISA-1 |

*, not a WRLFMD Reference Number

n/a, not available