**Supplementary table 1: Primer and probe sequences**

Detection of neurotropic astroviruses BoAstV-CH13 & ovAstV-CH16

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Primer/Probe Sequence ( 5' - 3' ) a | Target | Reference |
| CH13-A\_ForwardCH13-A\_ReverseCH13-A\_Probe | AGGCATGACTATGAGCGCGTAATCCGGTTGTGCCACCTCAFAMGGCAACGCACAGGCACTTGBHQ1 | BoAstV-CH13: Part of 5' end of ORF1a | Lüthi R, Boujon CL, Kauer R, Koch MC, Bouzalas IG, and Seuberlich T. 2018. Accurate and precise real-time RT-PCR assays for the identification of astrovirus associated encephalitis in cattle. Scientific Reports 8:9215. 10.1038/s41598-018-27533-8 |
| CH13-B\_ForwardCH13-B\_ReverseCH13-B\_Probe | TTTTGGCTCGTCACTTTGTGACAACCTCCTTGGCAATCTGFAMGATAAGCTTTGGAGGGGAGGBHQ1 | BoAstV-CH13: Center of ORF2 |
| CH16\_ForwardCH16\_ReverseCH16\_Probe | CGTAGCACCCCCTTACAGCACCTCGATCCTACTCGGCGTGFAMCTTAGAGGCCACGCAGAAGCBHQ1 | OvAstV-CH16: 3' end of ORF2 | Kuchler L, Koch MC, Seuberlich T, and Boujon CL. 2019. Archive Mining Brings to Light a 25-Year Old Astrovirus Encephalitis Case in a Sheep. Front Vet Sci 6:51. 10.3389/fvets.2019.00051 |

aFAM, 6-Carboxyfluorescein; BHQ1, Black Hole Quencher 1

Detection of various astroviruses using PanAstV-RT-PCR

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Primer/Probe Sequence ( 5' - 3' ) a | Target | Reference |
| PanAstV\_Forward1PanAstV\_Forward2PanAstV\_ReversePanAstV\_Forward\_nested1PanAstV\_Forward\_nested2 | GARTTYGATTGGRCKCGKTAYGAGARTTYGATTGGRCKAGGTAYGAGGYTTKACCCACATNCCRAACGKTAYGATGGKACKATHCCAGGTAYGATGGKACKATHCC | Various AstV: 3' end of ORF1b | Chu DK, Chin AW, Smith GJ, Chan KH, Guan Y, Peiris JS, and Poon LL. 2010. Detection of novel astroviruses in urban brown rats and previously known astroviruses in humans. J Gen Virol 91:2457-2462. 10.1099/vir.0.022764-0 |

|  |  |  |
| --- | --- | --- |
| Name | Primer/Probe Sequence ( 5' - 3' ) a | Target |
| CapAstV-G2.1\_500RCapAstV-G2.1\_301R | GTGATGTTAGGACCGCGTCAAGTGGGCCAACTGAGTGTAA | 5' end position as indicated in primer-annotation |
| CapAstV-G3.1\_508RCapAstV-G3.1\_320R | ACGAATAAGGCATGACCGCAAAAGCCTGTGATCCATGCCA |
| CapAstV-G5.1\_519RCapAstV-G5.1\_325R | TCCGTTGTGGAAGTGGTTGTGGCACGATCATTCATCAGCG |
| OvAstV-S5.1\_518ROvAstV-S5.1\_325R | CTGTCTTCATGGCGTTCTCAATTACGGTGTTGGGCCAGTT |
| OvAstV-S6.1\_501ROvAstV-S6.1\_309R | TGTATGATGGGTGTGGACTGTAGTGGTGCTCCTCTCTTCAT |

Rapid amplification of cDNA-ends

|  |  |  |
| --- | --- | --- |
| Name | Primer/Probe Sequence ( 5' - 3' ) a | Target |
| G2.1\_FG2.1\_RG2.1\_P | GGGCCAGCATGAAATACACCAGAGGGATGACCAGCTGACTTGAGFAMCCGAGTGTCAGCCGTTCCTA BHQ1 | Position 4'006 to 4'305 (ORF2) |
| G3.1\_FG3.1\_RG3.1\_P | CCAACACAAGTGTCGTGGTCAGCAAGTTCATTAGGCCAGGCTGCFAMAACACTCTGACACCACCCCG BHQ1 | Position 4'219 to 4'518 (ORF2) |
| G5.1\_FG5.1\_RG5.1\_P | CAACCACGCTGGATAATGGTGGAGGCATTTTGAGGGGTCCTGATFAMCCAGGCACAGGCTCAGATCA BHQ1 | Position 5'385 to 5'684 (ORF2) |
| S5.1\_FS5.1\_RS5.1\_P | CCTTGCATTGCCTGTTGGAGAGTGTGCCTGGGTGTATGATGGTCFAMCCAACGCGAGGTATCCCTGT BHQ1 | Position 5'155 to 5'454 (ORF2) |
| S6.1\_FS6.1\_RS6.1\_P | ACACAAACATCGTGGAGTGCACAAGCAAATTCACCATCCCAGGCFAMCGCTGGAACACTGGAATGCC BHQ1 | Position 4'285 to 4'548 (ORF2) |

Detection of neurotropic astroviruses BoAstV-CH13 & ovAstV-CH16; PanAstV-RT-PCR