



European Union Reference Laboratory for Fish and Crustacean Diseases

NATIONAL INSTITUTE OF AQUATIC RESOURCES, TECHNICAL UNIVERSITY OF DENMARK

PT1 2020

Ampoule No. 2020	Virus	Reference
AMPOULE I	VHSV DK-9895174	<p>VHSV Isolate DK-9895174</p> <p>Genotype: Ia</p> <p>Viral haemorrhagic septicaemia virus isolated in 1998, FP.VHSV.269 in Denmark from Rainbow trout (<i>Oncorhynchus mykiss</i>)</p> <p>Reference on isolate: Skall HF, Slierendrecht WJ, King JA, Olesen NJ. Experimental infection of rainbow trout <i>Oncorhynchus mykiss</i> with viral haemorrhagic septicaemia virus isolates from European marine and farmed fishes. Dis Aquat Organ. 2004 Mar 10;58(2-3):99-110. doi: 10.3354/dao058099. PMID: 15109131.</p> <p>Reference on G protein sequence: Toplak I, Hostnik P, Rihtarič D, Olesen NJ, Skall HF, Jenčič V (2010) First isolation and genotyping of viruses from recent outbreaks of viral haemorrhagic septicaemia (VHS) in Slovenia. Dis Aquat Org 92:21-29</p> <p>Reference on full genome sequence : Panzarin V, Cuenca A, Gastaldelli M, Alencar ALF, Pascoli F, Morin T, Blanchard Y, Cabon J, Louboutin L, Ryder D, Abbadi M, Toffan A, Dopazo CP, Biacchesi S, Brémont M and Olesen NJ (2020) VHSV Single Amino Acid Polymorphisms (SAPs) Associated With Virulence in Rainbow Trout. Front. Microbiol. 11:1984. doi: 10.3389/fmicb.2020.01984</p> <p>Accession number MK829413</p>



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AMPOULE II	IHNV 32/87 + IPNV Sp (Spjarup)	<p>IHNV Isolate 32/87</p> <p>First French isolate (April 1987) from rainbow trout.</p> <p>Genotype: Geno group E</p> <p>GenBank accession number: AY524121 (G-gene), FJ265711 (N-gene).</p> <p>Reference on isolate: Baudin Laurencin F (1987) IHN in France. Bulletin of the European Association of Fish Pathologists 7, 104.</p> <p>Reference on sequence: Kolodziejek J., Schachner O., Dürrwald R., Latif M. & Nowotny N. (2008) "Mid-G" region sequences of the glycoprotein gene of Austrian infectious hematopoietic necrosis virus isolates form two lineages within European isolates and are distinct from American and Asian lineages. Journal of Clinical Microbiology 46, 22-30. Johansson T., Einer-Jensen K., Batts W., Ahrens P., Björklund H. & Lorenzen N. (2009) Genetic and serological typing of European infectious haematopoietic necrosis virus (IHNV) isolates. Diseases of Aquatic Organisms 86, 213-221.</p> <p>IPN SP isolate Sp</p> <p>The Sp (Spjarup) reference strain of Infectious Pancreatic Necrosis (IPN) virus from farmed Rainbow trout in Denmark, isolated in 1969 by Dr. Vestergaard Jørgensen.</p> <p>Genotype: Genogroup 5</p> <p>Received from: National Veterinary Institute, Technical University of Denmark.</p> <p>GenBank accession numbers: AM889221 Segment B; AF342728 Segment A</p> <p>Reference on isolate: Jørgensen PEV & Bregnballe F (1969) Infectious pancreatic necrosis in rainbow trout in Denmark. <i>Nordisk Veterinærmedicin</i> 21, 142-148. Jørgensen PEV & Grauballe PC (1971) Problems in the serological typing of IPN virus. <i>Acta Veterinaria Scandinavica</i> 12, 145-147.</p> <p>References on sequences: P. F. Dixon, G.-H. Ngoh, D. M. Stone, S. F. Chang, K. Way, S. L. F. Kueh (2008) Proposal for a fourth aquabirnavirus serogroup Archives of Virology 153:1937-1941</p>
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AMPOULE III	SVCV DK-203273	SVCV isolate DK-203273 Spring Viraemia of Carp Virus isolated from Koi Carp in Denmark June 2003 Genotype: 1a Received from: National Veterinary Institute, Technical University of Denmark. GenBank accession numbers: The isolate is unpublished (in 2019)
AMPOULE IV	Blank	Cell supernatant from BF-2 cells 01/18 Passage No.: 36. Passage date:12.02.20 Tested negative for Mycoplasma: 13.01.20
AMPOULE V	EHNV 86/8774	EHNV isolate 86/8774 Australian freshwater isolate of epizootic haematopoietic necrosis virus from rainbow trout from Adaminaby Trout Farm, NSW obtained in 1986 by Jeremy Langdon. Received from: Prof. Whittington, The OIE reference laboratory for EHN, University of Sidney, Australia. Cell culture passage number: 9 GenBank accession numbers: FJ433873 , AY187045 , AF157667 Reference on isolate: Langdon JS, Humphrey JD & Williams LM (1988). Outbreaks of an EHNV-like iridovirus in cultured rainbow trout, <i>Salmo gairdneri</i> Richardson, in Australia. <i>Journal of Fish Diseases</i> 11, 93-96. References on sequences: Hyatt AD, Gould AR, Zupanovic Z, Cunningham AA, Hengstberger S, Whittington RJ, Kattenbelt J & Coupar BEH (2000). Comparative studies of piscine and amphibian iridoviruses. <i>Archives of Virology</i> 145, 301-331. Jancovich JK, Bremont M, Touchman JW & Jacobs BL (2010). Evidence for multiple recent host species shifts among the ranaviruses (family Iridoviridae). <i>Journal of Virology</i> 84, 2636-2647. Marsh IB, Whittington RJ, O'Rourke B, Hyatt AD & Chisholm O (2002) Rapid differentiation of Australian, European and American ranaviruses based on variation in major capsid protein gene sequence. <i>Molecular and Cellular Probes</i> 16, 137-151.



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AMPOULE VI	Blank	<p>Cell supernatant from BF-2 cells</p> <p>01/18</p> <p>Passage No.: 36. Passage date:12.02.20</p> <p>Tested negative for Mycoplasma: 13.01.20</p>
AMPOULE VII	ISAV 390/98	<p>Infectious Salmon Anaemia Virus</p> <p>ISAV HPRΔ isolated from Atlantic salmon in Scotland in 1998.</p> <p>Received from: Marine Scotland Science .</p> <p>Genbank accession number AJ276859 ; HQ166832</p> <p>Reference on sequence and isolate Rimstad,E., Mjaaland,S., Snow,M., Mikalsen,A.B. and Cunningham, C.O. Characterization of the infectious salmon anemia virus genomic segment that encodes the putative hemagglutinin J. Virol. 75 (11), 5352-5356 (2001)</p>
AMPOULE VIII	SAV3 Norway-R- 1_2007 + ISAV 2016-70-1297	<p>Salmonid alpha virus (SAV) 3, Pancreas Disease Virus (PD) Norway – R-1_2007</p> <p>Received from: Dr. Hilde Sindre, Norwegian Veterinary Institute, Norway</p> <p>Reference on isolate: Taksdal T., Bang Jensen B., Böckerman I., McLoughlin M.F., Hjortaas M.J., Ramstad A., Sindre H. Mortality and weight loss of Atlantic salmon, Salmo salar L., experimentally infected with salmonid alphavirus subtype 2 and subtype 3 isolates from Norway. J Fish Dis. 2015;38:1047–1061</p> <p>Gene Bank Ref.: LT630447</p> <p>References on the sequences: Hjortaas M.J., Bang Jensen B., Taksdal T., Olsen a B., Lillehaug a, Trettenes E. & Sindre H. (2016) Genetic characterization of salmonid alphavirus in Norway. Journal of Fish Diseases 39, 249–257.</p> <p>+ Infectious Salmon Anaemia Virus. ISAV 2016-70-1297_Vir4415</p> <p>ISAV HPRΔ isolate from Atlantic salmon in Norway. Hestholmen in 2016.</p> <p>Received from Norwegian Veterinary Institute.</p> <p>Genbank accession number MK216307</p>



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AMPOULE IX	KHV NRIA 0301	Koi Herpes Virus, NRIA Virus isolated from Common carp farmed in japan – province of Ibaragi in 2003. Carp, the sequence of the isolate is unpublished. Genotype : CyHV-3 Received from : Kei Juasa Genbank accession number : N/A Reference on the isolate Sano et al (2004), Fish Pathology, 39,165-167