

SUSCEPTIBILITY OF FISH SPECIES TO INFECTION WITH KOI HERPESVIRUS (KHV)

The following table shows the fish species assessed against the criteria for susceptibility to infection with koi herpesvirus and the outcomes of the assessments. For details about the specific assessment please refer to the link included in the source column of the table.

Assessment Table Key:

N: Natural infection	Y: Demonstrates criterion is met	ND: Not determined
E: Experimental (non-invasive)	N: Criterion is not met	NS: Not scored
EI: Experimental invasive	I: Inconclusive	N/A: Not applicable

Scientific name	Common name	Stage 1: Route of transmission	Stage 2: Pathogen identification	Stage 3: Evidence of infection				Outcome	References	Source	Year of adoption
				A	B	C	D				
Assessed as a susceptible species and included in Article 10.7.2. of Chapter 10.7. of the <i>Aquatic Code</i>											
<i>Cyprinus carpio</i>	all varieties and subspecies of common carp	N	Culture and subsequent sequencing	Y	Y	Y	Y	1	Aoki <i>et al.</i> , 2007; Hedrick <i>et al.</i> , 2000; St-Hilaire <i>et al.</i> , 2005; McColl <i>et al.</i> , 2016;	ad hoc Group report: November 2017	2019
<i>Cyprinus carpio koi</i>	koi carp	N	Culture and subsequent sequencing	Y	Y	Y	Y	1	Sano <i>et al.</i> , 2004; Rahmati-Holasoo <i>et al.</i> , 2016		
e.g. <i>Cyprinus carpio</i> x <i>Carassius auratus</i>	common carp hybrids	E	PCR	N	N	Y	Y	1	Bergmann <i>et al.</i> , 2010b; Kempter <i>et al.</i> , 2009	ad hoc Group report: November 2017	2019
e.g. <i>Cyprinus carpio</i> x <i>Carassius carassius</i>	common carp hybrids	E	PCR	N	N	Y	Y	1	Bergmann <i>et al.</i> , 2010b	ad hoc Group report: November 2017	2019
Assessed as incomplete evidence and listed in Section 2.2.2. of Chapter 2.3.6. in the <i>Aquatic Manual</i>											
<i>Carassius auratus</i>	goldfish	N	PCR nested/sequence	Y	N	N	N	2	Bergmann <i>et al.</i> , 2009	ad hoc Group report: November 2017	2019
		E	PCR	Y	N	N	N	2	Bergmann <i>et al.</i> , 2010a		
		E	PCR	N	N	N	N	2	EI-Matbouli <i>et al.</i> , 2007		

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		E	PCR	N	N	N	N	2	Matbouli <i>et al.</i> , 2011		
		N	PCR	N	N	N	N	2	Sadler <i>et al.</i> , 2008		
		EI	PCR	N	N	N	N	2	Hedrick <i>et al.</i> , 2006		
		E	PCR	N	N	N	Y	2	Yuasa <i>et al.</i> , 2013		
<i>Carassius carassius</i>	crucian carp	N	PCR	N	N	N	Y	2	Cho <i>et al.</i> , 2014	ad hoc Group report: November 2017	2019
<i>Ctenopharyngodon idella</i>	grass carp	N	PCR nested/sequence	Y	N	N	N	2	Bergmann <i>et al.</i> , 2009; Kempster <i>et al.</i> , 2012; Radosavljevič <i>et al.</i> , 2012	ad hoc Group report: November 2017	2019
Assessed as having PCR positive results but no active infection and listed in the second paragraph of Section 2.2.2. of Chapter 2.3.6. in the <i>Aquatic Manual</i>											
<i>Acipenser gueldenstaedtii</i>	Atlantic sturgeon	N	PCR	N	N	N	N	3	Kempster <i>et al.</i> , 2009	ad hoc Group report: November 2017	2019
<i>Acipenser ruthenus</i> x <i>Huso huso</i>	hybrid sterlet x beluga	E	nested PCR	N	N	N	N	3	Pospichal <i>et al.</i> , 2016	ad hoc Group report: November 2017	2019
<i>Acipenser oxyrinchus</i>	Russian sturgeon	N	PCR	N	N	N	N	3	Kempster <i>et al.</i> , 2009	ad hoc Group report: November 2017	2019
<i>Leuciscus idus</i>	blue back ide	N	PCR nested/sequence	N	N	N	N	3	Bergmann <i>et al.</i> , 2009	ad hoc Group report: November 2017	2019
<i>Rutilus rutilus</i>	common roach	E	PCR nested	N	N	N	N	3	Kempster <i>et al.</i> , 2012	ad hoc Group report: November 2017	2019

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<i>Tinca tinca</i>	Tench	E	PCR nested/N	N	N	N	N	3	Fabian <i>et al.</i> , 2013; Fabian <i>et al.</i> , 2016; Kempter <i>et al.</i> , 2012; Radosavljevič <i>et al.</i> , 2012	ad hoc Group report: November 2017	2019
<i>Hypophthalmichthys molitrix</i>	silver carp	E	PCR nested	N	N	N	N	3	Kempter <i>et al.</i> , 2012; Radosavljevič <i>et al.</i> , 2012	ad hoc Group report: November 2017	2019
<i>Gammarus pulex</i>	scud (crustacean)	N	PCR nested	N	N	N	N	3	Kielpinski <i>et al.</i> , 2010	ad hoc Group report: November 2017	2019
<i>Barbatula barbatula</i>	stone loach	E	nested PCR	N	N	N	N	3	Popichal <i>et al.</i> , 2016	ad hoc Group report: November 2017	2019
<i>Gymnocephalus cernuus</i>	Eurasian ruffe	E	PCR nested	N	N	N	N	3	Kempter <i>et al.</i> , 2012	ad hoc Group report: November 2017	2019
<i>Perca fluviatilis</i>	European perch	E	PCR nested	N	N	N	N	3	Kempter <i>et al.</i> , 2012	ad hoc Group report: November 2017	2019
<i>Anodonta cygnea</i>	swan mussel	N	PCR nested	N	N	N	N	3	Kempter <i>et al.</i> , 2012	ad hoc Group report: November 2017	2019
Assessed as evidence of non-susceptibility (e.g. experimental invasive studies with no evidence of infection)											
<i>Ambassis agassizii</i>	olive perchlet	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	

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<i>Anguilla australis</i>	short finned eel	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Bidyanus bidyanus</i>	silver perch	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Galaxias maculatus</i>	common galaxias	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Hypseleotris sp.</i>	carp gudgeon	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Maccullochella peelii</i>	Murray cod	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Macquaria ambigua</i>	golden perch	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Melanotaenia duboulayi</i>	crimson spotted rainbowfish	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Mordacia mordax</i>	short headed lamprey	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Mugil cephalus</i>	sea mullet	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report:	

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										November 2017	
<i>Neoarius graeffei</i>	salmon cat fish	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Nematalosa erebi</i>	bony bream	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Retropinna semoni</i>	Australian smelt	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	
<i>Tandanus tandanus</i>	eel-tailed catfish	E	qPCR and RT-PCR	N	N	N	N	4	McColl <i>et al.</i> , 2016	ad hoc Group report: November 2017	