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Appendix Table S1. Sequences used in the present study

Yezo virus strain name	Year	Accession (L)	L clade	Accession (M)	M clade	Accession (S)	S clade	Country	Host	Modifications on degenerative nucleotides prior to the analysis
HH001-2019	2019	LC621352	II-J	LC621353	II-J	LC621354	II-J	Japan	<i>Homo sapiens</i>	
HH003-2020	2020	LC621355	I-J	LC621356	I-J	LC621357	I-J	Japan	<i>Homo sapiens</i>	
HH011-2020	2020	LC621358	N/A	LC621359	N/A	LC621360	N/A	Japan	<i>Homo sapiens</i>	Removed from analyses due to the identical sequences to HH007-2016
BT-1821	2020	LC735725	I-J	LC735726	I-J	LC735727	I-J	Japan	<i>Ixodes persulcatus</i>	
BT-1826	2020	LC735728	I-J	LC735729	I-J	LC735730	I-J	Japan	<i>Ixodes persulcatus</i>	
BT-1844	2020	LC735731	I-J	LC735732	I-J	LC735733	I-J	Japan	<i>Ixodes persulcatus</i>	
BT-1864	2020	LC735734	I-J	LC735735	I-J	LC735736	I-J	Japan	<i>Ixodes persulcatus</i>	
BT-1968	2020	LC790674	I-J	LC790675	I-J	LC790676	I-J	Japan	<i>Ixodes persulcatus</i>	
BT-2135	2021	LC790677	I-J	LC790678	II-J	LC790679	I-J	Japan	<i>Ixodes persulcatus</i>	
BT-2155	2021	LC790680	I-J	LC790681	II-J*	LC790682	I-J	Japan	<i>Ixodes persulcatus</i>	
T-HLJ01	2021	ON563268	I-C	ON563269	I-C	ON563270	I-C	China	<i>Ixodes persulcatus</i>	
T-HLJ02	2021	ON563271	II-C	ON563272	II-C	ON563273	II-C	China	<i>Ixodes persulcatus</i>	
T-HLJ03	2021	ON563274	I-C	ON563275	I-C	ON563276	I-C	China	<i>Ixodes persulcatus</i>	
T-IM01	2021	ON563277	II-C	ON563278	II-C	ON563279	II-C	China	<i>Ixodes persulcatus</i>	
T-JL01	2021	ON563280	I-C	ON563281	I-C	ON563282	I-C	China	<i>Ixodes persulcatus</i>	
H-IM01	2018	ON563283	II-C	ON563284	II-C	ON563285	II-C	China	<i>Homo sapiens</i>	
TIGMIC_1	2023	ON811839	I-C	PQ231073	I-C	PQ231068	I-C	China	<i>Ixodes persulcatus</i>	
TIGMIC_2	2023	ON811841	II-C	PQ231074	II-C	PQ231069	II-C	China	<i>Ixodes persulcatus</i>	
TIGMIC_3	2023	ON811933	II-C	PQ231075	II-C	PQ231070	II-C	China	<i>Ixodes persulcatus</i>	
HH007-2016	2016	OQ994737	II-J	OQ994738	II-J	LC628643	II-J	Japan	<i>Homo sapiens</i>	
HH008-2017	2017	OQ994739	II-J	OQ994740	II-J	LC628644	II-J	Japan	<i>Homo sapiens</i>	
HH009-2017	2017	OQ994741	II-J	OQ994742	II-J	LC628645	II-J	Japan	<i>Homo sapiens</i>	
THQG1707B	2017	OR148883	Outgroup	OR148881	Outgroup	OR148882	I-C*	China	<i>Ixodes persulcatus</i>	L: N1631T, M: M2396C, 7 Ns in M segment were maintained.
YBQG1712	2017	OR148886	II-C	OR148884	II-C	OR148885	I-C*	China	<i>Ixodes persulcatus</i>	
YBQG1739	2017	OR148889	I-C	OR148887	I-C	OR148888	I-C	China	<i>Ixodes persulcatus</i>	L: R6338A
Heilongjiang	2024	PP708714	II-J	PP708715	II-J	PP708716	I-C*	China	<i>Ixodes persulcatus</i>	
MDJ003	2023	PQ220368	II-C	PQ220363	II-C	PQ220358	II-C	China	<i>Homo sapiens</i>	
MDJ014	2023	PQ220369	II-C	PQ220364	II-C	PQ220359	I-C*	China	<i>Homo sapiens</i>	
MDJ025	2023	PQ220370	II-C	PQ220365	II-C	PQ220360	II-C	China	<i>Homo sapiens</i>	
MDJ486	2023	PQ220371	I-C	PQ220366	I-C	PQ220361	I-C	China	<i>Homo sapiens</i>	S: Insert 3nt for gapfilling the shorter N ORF.
MDJ2209	2022	PQ220372	II-C	PQ220367	II-C	PQ220362	II-C	China	<i>Homo sapiens</i>	
TIGMIC_4	2023	PQ231078	I-C	PQ231076	I-C	PQ231071	I-C	China	<i>Ixodes persulcatus</i>	46 Ns in L segment were maintained.
TIGMIC_5	2023	PQ231079	I-C	PQ231077	I-C	PQ231072	I-C	China	<i>Ixodes persulcatus</i>	
HH074-2023**	2025	PX120897	II-J	PX120892	II-J	PX120887	II-J	Japan	<i>Homo sapiens</i>	
HH080-2023**	2025	PX120898	II-J	PX120893	II-J	PX120888	II-J	Japan	<i>Homo sapiens</i>	
HH081-2023**	2025	PX120899	II-J	PX120894	II-J	PX120889	II-J	Japan	<i>Homo sapiens</i>	
HH083-2024**	2025	PX120900	II-J	PX120895	II-J	PX120890	II-J	Japan	<i>Homo sapiens</i>	
HH073T-2023**	2025	PX120896	II-J	PX120891	II-J	PX120886	II-J	Japan	<i>Ixodes persulcatus</i>	
Chita_2024-1	2024	PV061571	II-J	PV061576	II-J	PV061581	II-C*	Russia	<i>Ixodes persulcatus</i>	
Khabarovsk_2024-1	2024	PV061572	II-C	PV061577	I-C*	PV061582	II-C	Russia	<i>Ixodes persulcatus</i>	
Primorye_2024-1	2024	PV061568	II-C	PV061573	II-C	PV061578	II-C	Russia	<i>Ixodes persulcatus</i>	
Primorye_2024-2	2024	PV061569	II-C	PV061574	II-C	PV061579	II-C	Russia	<i>Ixodes persulcatus</i>	
Primorye_2024-3	2024	PV061570	I-C	PV061575	I-C	PV061580	II-C*	Russia	<i>Ixodes persulcatus</i>	
(Sulina virus)						NC_078998				

*Genetic reassortment

**Strains reported in the present study

Appendix Table S2. Summary of samples collected from patients

Patient No.	Year	Reported area	Collection phase	Days after onset	RT-qPCR	IgG ELISA	IgM ELISA	FRNT	Isolate	Reference
1	2014	Eastern	Acute	7	+	-	+	-	na*	Kodama et al., 2021
2	2016	Eastern	Acute	6	+	-	+	-	HH007-2016	Kodama et al., 2021
			Recovery	24	-	+	+	+		
3	2017	Eastern	Acute	3	+	-	-	-	HH008-2017	Kodama et al., 2021
4	2017	Northern	Acute	5	+	-	-	-	HH009-2017	Kodama et al., 2021
5	2019	Central	Acute	5	+	-	-	NT**	HH001-2019	Kodama et al., 2021
			Acute	6	+	-	+	-		
			Acute	7	+	-	+	NT		
			Acute	8	+	-	+	NT		
			Acute	9	+	-	+	+		
			Acute	10	+	-	+	NT		
			Acute	12	+	+	+	NT		
			Recovery	15	+	+	+	NT		
			Recovery	19	+	+	+	+		
			Recovery	33	NT	+	+	+		
			Recovery	168	-	+	-	+		
6	2020	Central	Acute	3	+	-	-	NT	HH003-2020	Kodama et al., 2021
			Acute	4	+	-	-	-		
			Acute	5	+	-	-†	NT		
			Recovery	7	-	-	+	NT		
			Recovery	8	-	+	+	NT		
			Recovery	10	-	+	+	NT		
			Recovery	15	-	+	+	+		
			Recovery	21	-	+	+	+		
			Recovery	36	-	+	-	+		
			Recovery	56	-	+	-	NT		
			Recovery	184	-	+	-	-		
7	2020	Central	Acute	16	+	-	+	+	HH011-2020	Kodama et al., 2021
8	2021	Central	Past infection	na	NT	+	-	+	na	Kosaka et al., 2024
9	2023	Central	Acute	10	+	+	+	+	HH073T-2023††	Ogata et al., 2024
			Recovery	35	-	+	+	+		
			Recovery	57	-	+	+	+		
			Recovery	91	-	+	+	+		
			Recovery	136	-	+	-	+		
			Recovery	186	-	+	-	+		
			Recovery	354	-	+	-	+		
			Recovery	438	-	+	-	+		
			Recovery	522	-	+	-	+		
10	2023	Northern	Acute	4	+	-	-	-	HH074-2023	Noguchi et al., 2024
			Recovery	21	-	+	+	+		
11	2014	Eastern	Acute?	na	+	-	+	+	na	Present study
12	2015	Eastern	Acute	12	-	+	+	-	na	Present study
			Recovery	20	-	+	+	+		
13	2016	Eastern	Acute	7	+	-	+	-	na	Present study
14	2016	Northern	Acute?	na	+	-	+	-	na	Present study
15	2021	Northern	Acute	7	+	-	+	-	na	Present study
16	2023	Northern	Acute	5	+	-	+	-	na	Suzuki et al., 2024
			Recovery	25	-	+	+	+		
17	2023	Central	Acute	2	+	-	-	-	HH080-2023	Present study
			Recovery	18	-	+	+	+		
18	2023	Northern	Acute	2	+	-	-	-	HH081-2023	Morita et al., 2025
			Recovery	32	-	+	+	+		
19	2024	Northern	Past infection?	na	-	+	-	+	na	Present study
20	2024	Eastern	Acute	3	+	-	-	-	HH083-2024	Present study
			Recovery	29	-	+	+	+		
21	2024	Southern	Acute	10	+	-	+	+	na	Present study
22	2014	Eastern	Acute	na	-	+	-	+	na	Present study

*: not available

**:: not tested

†: previously positive which was negative with the current criteria

††: isolated from a tick attaching to the patient