

Virus Name: Okhotskiy		Abbreviation: OKHV
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Kemerovo		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation LEIV-70C	Accession Number	Original Date Submitted 11/27/1984
Family Reoviridae	Genus Orbivirus	
Information From D.K. Lvov and colleagues	Address Ivanovsky Inst. of Virology, Gamaleya St., 16, Moscow D-98, USSR	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) D.K. Lvov and colleagues	Isolated at Institute Moscow, USSR	
Host Genus Ixodes (Ceratiixodes) putus, pool of 50 ticks	Species	Host Age/Stage Nymphs
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method Collected by hand	Collection Date 8/18/1969	
Place Collected (Minimum of City, State, Country) Tyuleniy island, sea of Okhotsk, USSR		
Latitude 48° 30' N	Longitude 144° 30' E	
Macrohabitat Territory of seabird colonies	Microhabitat In the soil	Method of Storage until Inoculated Alive at 4dC in refrigerator
Footnotes		

Section III - Method of Isolation

Inoculation Date
11/21/1969

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical

Pieces (number of genome segments)	Infectivity	Sedimentation Coefficients(s) (S)
Percentage wt, of Virion Protein	Lipid	Carbohydrate
Virion Polypeptides: Number	Details	
Non-virion Polypeptides: Number	Details	
Virion Density	Sedimentation Coefficients(s) (S)	
Nucleocapsid Density	Sedimentation Coefficients(s) (S)	

Stability of Infectivity (effects)

pH (infective range)

Lipid Solvent (ether - % used to test)	After Treatment Titer	Control Titer
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions	
Mean nm	Range nm	
Measurement Method	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry

Morphogenesis

Site of Constituent Formation in Cell Site of Virion Assembly Site of Virion Accumulation

Inclusion Bodies

Other

Hemagglutination

Hemagglutination

No

Antigen Source

SMB ext. by sucrose-acetone

Erythrocytes (species used)

Goose

pH Range

5.5-7.0

pH Optimum

Temperature Range

4dC, 22dC

Temperature Optimum

Remarks

Serologic Methods Recommended

CF, NT

Footnotes

Section V - Antigenic Relationship and Lack of Relationship to Other Viruses

Okhotskiy antigen in the CF test did not react with MIAF to the following arboviruses: group A (polyvalent, Sindbis, WEE, Getah); group B (polyvalent, tick-borne encephalitis, Jap. enc. , West Nile, Tyuleniy, Powassan); the Uukuniemi group (Sumakh, Zaliv Terpeniya); the California group (Tahyna); the Simbu group (Simbu); the Quaranfil group (Quaranfil, Abal); the NSD group (Dugbe); the Kaisodi group (Kaisodi, Lanjan, Silverwater); the Qalyub group (Bandia, Qalyub); the CHF-Congo group (CHF); the Hughes group (Hughes); others (Bhanja, DGK, Astra, Colorado tick fever, Matucare, Nyamanini, Thogoto, Upolu, Sakhalin).

MIAF or Antigens/viruses	Antigenic Relationship to Kemerovo Group			
	Antigen/Virus of OKH		MIAF of OKH	
	CF	NT	CF	NT
Okhotskiy	64	2.5	64	2.5
Kemerovo	16/64	0.08/4.5	16/64	0/4.5
Tribec	8/128	0/4.1	16/128	0/4.1
Baku	8/128		8/128	
Huacho (Ar 883)	8/64		8/64	
Wad Medani	8/64		8/64	
Mono Lake			8/-	

CF: homologous/heterologous

NT: LNI in dex; homologous/heterologous

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice

Cell system (a)	Virus passage history (b)	Evidence of Infection							Growth Without CPE +/- (g)
		CPE			PLAQUES				
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)		

Section VII - Natural Host Range (Additional text can be added below table)

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Ixodes (Ceratiodes) putus	5/160 pools (7,240 ticks)		Tyuleniy Island, sea of Okhotsk, Sakhalinsk region, USSR
Ixodes (Ceratiodes) putus	3/164 pools (9,800 ticks)		Ary Kamen' rock, Commodore Islands, Kamchatsk region, USSR
Ixodes (Ceratiodes) putus	1/17 pools (1,156 ticks)		The southeastern coast of Chukotka, Magadansk region, USSR
Phalacrocorax (bird)		1/141 CF	Moneron Island, Sakhalinsk region, USSR
Phalacrocorax		1/8 CF	
Uria aalge (bird)		3/156 CF	Commodore Islands, Kamachatsk region, USSR
Uria aalge		6/52 CF	Tyuleniy Island, USSR
Fulmarus glacialis (bird)		14.6% CF	

Section VIII - Susceptibility to Experimental Infection (include viremia)

Experimental host and age	Passage history and strain	Inoculation Route-Dose	Evidence of infection	AST (days)	Titer log ₁₀ /ml
Mice (nb)		ic 0.01	Death	2-4	7.0
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic 0.03	None		
Mice (wn)		ip			

Section IX - Experimental Arthropod Infection and Transmission

Arthropod species & virus source(a)	Method of Infection log ₁₀ /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log ₁₀ /ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System

Section X - Histopathology

Character of lesions (specify host)

Inclusion Bodies

Intranuclear

Organs/Tissues Affected

Category of tropism

Section XI - Human Disease

In Nature	Residual	Death
Subclinical	Overt Disease	
Clinical Manifestations		
Number of Cases	Category (i.e. febrile illness, etc.)	

Section XII - Geographic Distribution

Known (Virus detected) Islands and coastal areas, Sea of Okhotsk, USSR
Suspected (Antibody only detected)

Section XIII - References

1. Lvov, D.K., et al. 1973. Archiv. ges. Virusforsch. 41:160-164.

Remarks

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