

Virus Name: **Okhotskiy**

Abbreviation: **OKHV**

Status: Possible Arbovirus
SALS Level: 2
Antigenic Group: Kemerovo
Taxonomic status: *Orbivirus*
Other Information: None.

Select Agent:
SALS Basis: S

HEPA Filtration:

Section I - Full Virus Name and Prototype Number

Full Virus Name: Okhotskiy
Prototype Number: LEIV-70C
Information from: D.K. Lvov and colleagues *
Date: 11/27/1984
Address: Ivanovsky Inst. of Virology, Gamaleya St., 16, Moscow D-98, USSR *

Reviewed by editor

Section II - Original Source

Isolated by: D.K. Lvov and colleagues
at: Moscow, USSR
Genus and species: Ixodes (Ceratiixodes) putus, pool of 50 ticks
Sentinel X
Age/Stage: Nymphs
Sex:

Isolated From	Isolation detail
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Signs and symptoms of illness:
Arthropod engorged: depleted gravid
Time held alive before inoculation:
Collection date: 8/18/1969
Method: Collected by hand
Place collected: 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 and Validity

Inoculation Date: 11/21/1969
Animal: nb mice
Embryonated egg:
Tissue Culture:
(Details in Section VI - Biologic Char.)
Route inoculated: Intracerebral
Reisolation: Yes
Other reasons:
Homologous antibody formation by source animal (See Section II):
Test used: HI CF NT
Other:
Footnotes:

Section IV - Virus Properties

Physicochemical:

RNA: DNA: Single Strand: Double Strand:
Pieces: Infectivity: Sedimentation coefficient(s): /strong>
Percentage wt. of virion protein, lipid carbohydrate
Virion polypeptides:
Number: Details:
Non-virion polypeptides:
Number: Details:
Virion density: Sedimentation coefficient:
Nucleocapsid density Sedimentation coefficient:

Stability of infectivity (effects) pH

Lipid solvent:
(ether) After treatment titer Control titer
(chloroform) After treatment titer Control titer
Detergent:
(deoxycholate) After treatment titer Control titer
Other (formalin, radiation):

Virion morphology:

Shape Dimensions
Mean (nm) range (nm) how measured
Surface projections, envelope
Nucleocapsid dimensions, symmetry

Morphogenesis:

Site of constituent formation in cell
Site of virion assembly
Inclusion bodies
Other

Hemagglutination:

Hemagglutination No Antigen source SMB ext. by sucrose-acetone
Erythrocytes Goose pH range 5.5-7.0 pH optimum
Temperature optimum range 4dC, 22dC
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 Quarafil group (Quarafil, 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

Susceptibility of Cell Culture Systems:

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

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)		Ariy 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 (Record Viremia)

Experimental host and age	Passage history and strain	Inoculation Route-Dose	Evidence of infection	AST (days)	Titer log10/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			

