

Rabbit Coronavirus-like Viruses[‡]

Coronaviridae

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Virion

Morphology:	Spherical
Envelope:	Yes
Diameter (nm):	120–160
Length (nm):	
Structural components:	Nucleocapsid, core, envelope
Buoyant density (g/mL):	1.23–1.24
Buoyant density method:	CsCl
Lipid composition:	Envelope lipids are derived from cytoplasmic membrane of host cell
Additional information:	

Genome

Nucleic acid:	RNA
Strandedness:	
Polarity:	
Configuration:	
Segment organization:	0 segment(s): (kb) total (calculated)
G + C content (%):	Unknown
mRNA transcripts:	Unknown
Open reading frames:	Unknown
Additional information:	

Replication

Entry mechanism:	Receptor-mediated endocytosis
Site of transcription:	Cytoplasm
Transcriptase:	Virus-encoded RNA-dependent RNA polymerase
Site of genome replication:	Cytoplasm

[‡]This chapter was reprinted from the first edition of the Springer Index of Viruses. Taxonomy and classification of the virus species described in this chapter may have changed.

Replicase:	Virus-encoded RNA-dependent RNA polymerase
Replication intermediate:	Negative-strand RNA intermediate
Site of virion assembly:	Cytoplasm, the intermediate compartment
Egress mechanism:	Unknown
Additional information:	

History

Year of event	Event	References
1979	Coronavirus-like particles identified in rabbits with cardiomyopathy	Small et al (1979)
1980	Coronavirus-like particles identified in the intestine of laboratory rabbits	Lapierre et al (1980)
1987	Serological relatedness demonstrated between RbCoV and human coronaviruses	Small, Woods (1987)
1992	RbCoV established as animal model for dilated cardiomyopathy	Alexander et al (1992)

Genus Members

Species name	Synonyms	Wild-type strains/isolates	Natural host range	Experimental host range	Membership status
Rabbit coronavirus (RbCoV)			European rabbits (<i>Oryctolagus cuniculus</i>)		Unassigned

Biology

Species	Permissive cell lines	Tissue tropism	Cytopathic effects	Additional information
RbCoV		Intestinal epithelium, myocardium		Haemagglutinates rabbit red blood cells

Diseases

Disease	Causative agent	Affected organisms	Disease characteristics	Transmission route/vector	Treatment	Geographic distribution
Rabbit infectious cardiomyopathy	RbCoV	Rabbits	Enteritis, myocarditis, dilated cardiomyopathy and congestive heart failure	Faecal-oral		Canada, Europe

Diagnosis

Method	Species	Sample material	Detection target	References
Electron or immunoelectron microscopy	RbCoV	Faeces, tissue (heart) samples	Particle morphology	Descôteaux et al (1983)

References

Edwards et al (1992)
Edwards et al (1992)

Lapierre et al (1980)
Small et al (1987)

