

Viral Vector Quick Biosafety Reference

Viral Vector	Risk Group	Biosafety Level		Special Requirements	USDS Permit Required	Disinfectant
		Lab work	Animal work			
Adenovirus 5	2	BSL-2	ABSL-2*	Adenoviral vector must be administered to animals under ABSL-2 containment. *Animals must be housed under ABSL-2 containment for 72-hours post administration.	NO	Freshly prepared 1:10 household bleach solution. Alcohol not effective disinfectant against adenovirus.
Adeno- associated virus (AAV)	1	BSL-1 / BSL-2*	ABSL-1 / ABSL-2**	*AAV must be packaged under BSL-2 due to use of HEK293 cells; once packaged, AAV may be handled at BSL-1. **Animals are housed under ABSL-1 containment; if helper virus is present, ABSL-2 containment is required.	NO	Freshly prepared 1:10 household bleach solution. Alcohol not effective disinfectant against AAV.
Epstein-Barr virus	2	BSL-2	ABSL-2	Epstein-Barr viral vectors must be administered to animals under ABSL-2 containment. Animals must be housed under ABSL-2 containment.	NO	Freshly prepared 1:10 household bleach solution.
Herpes Virus HSV-I and HSV- II	2	BSL-2	ABSL-2	HSV vectors must be administered to animals under ABSL-2 containment. Animals must be housed under ABSL-2 containment.	NO	Freshly prepared 1:10 household bleach solution.
Pseudorabies virus	2	BSL-2	ABSL-2	PRV vectors must be administered to animals under ABSL-2 containment. Animals must be housed under ABSL-2 containment.	YES	Freshly prepared 1:10 household bleach solution.
Recombinant Rabies Virus	3	BSL-2/ BSL-3	ABSL-2/ ABSL-3	Wildtype virus must be administered in and animals housed under ABSL-3 containment Recombinant vectors must be administered in and animals housed under ABSL-2 containment	YES	70% Ethanol
Retroviruses / Murine Leukemia virus (MLV)	1/2	BSL-1 / BSL-2*	ABSL-1 / ABSL-2**	Murine specific retroviruses may be handled at BSL-1 / ABSL-1. *BSL-2 required for broad host or pseudotyped murine retroviruses **ABSL-2 for 72-hours post administration.	NO	Freshly prepared 1:10 household bleach solution.
Retroviruses / Lentivirus	3	BSL-2	ABSL-2	Lentiviral vector must be administered to animals under ABSL-2 containment. Animals must be housed under ABSL-2 containment.	YES, for non-human lentivirus	Freshly prepared 1:10 household bleach solution.
Vesicular stomatitis virus (VSV)	2*/3	BSL-2/ BSL-3**	ABSL-2/ ABLS-3**	VSV vectors must be administered to animals and animal housed under ABSL-2 containment. ** * laboratory adapted strains are RG 2 **Chandipura and Piry viruses require BSL-3/ABSL-3.	YES	Freshly prepared 1:10 household bleach solution. Alcohol not effective disinfectant against VSV