

Table 1. Animal housing requirements for Biosafety and Biosecurity.

Viral Vector (Replication defective)	Biosafety Level In vitro	Animal Biosafety Level		Additional Issues
		In vivo w/o human cells	In vivo with human cells	
AAV (without helper)	BSL - 1+	ABSL - 1+	ABSL - 1+	
AAV (with helper)	BSL - 2	ABSL - 1+	ABSL - 2	
Adenovirus	BSL - 2	ABSL - 1+ with testing, found negative ABSL - 2 w/o testing; for 48hrs, then ABSL - 1+ ABSL - 2 -toxin or oncogene	ABSL - 2	
Canine Adenovirus -ecotropic	BSL - 1+	ABSL-2 for 48hrs, then ABSL-1+	ABSL-2 for 48hrs, then ABSL-1+	Animal Biosecurity
-toxin or oncogene -amphotropic or VSV-g pseudotyped	BSL - 2			
Murine Retrovirus -ecotropic	BSL - 1+	ABSL - 1+	ABSL - 1+	Animal Biosecurity
-toxin or oncogene -amphotropic or VSV-g pseudotyped	BSL - 2	ABSL - 2	ABSL - 2	
Lentivirus -3rd generation or higher	BSL - 2+	ABSL - 2 for 48hrs, then ABSL - 1+	ABSL - 1+; if cells transduced >48hrs prior to administration ABSL - 2 if cells transduced, <48 hrs; remain ABSL - 2 for 48hrs, then ABSL - 1+	
Retrovirus (SIAV ,EIAV)	BSL - 1+, 2	ABSL - 2	ABSL - 2	
Herpes simplex virus (I, II)	BSL - 2	ABSL - 2	ABSL - 2	
Pseudorabies virus (if amplicon only)	BSL - 2	ABSL - 2	ABSL - 2	Animal Biosecurity
Vaccinia	BSL - 2	ABSL - 2	ABSL - 2	
Rabies	BSL - 2	ABSL - 2	ABSL - 2	Animal Biosecurity
Sendai virus -ecotropic	BSL - 1+	ABSL - 2	ABSL - 2	Animal Biosecurity
-toxin or oncogene -amphotropic or VSV-g pseudotyped	BSL - 2			