

Table 1. Summary of Biosafety Levels - Working with Viral Vectors (not wild-type virus)

Viral Vector	Biosafety Level		Additional Precautions
	in vitro	in vivo	
Adenovirus <i>NO human materials</i>	BSL2	ABSL2 48hrs, then ABSL1	All BSL2 work done in biosafety cabinet, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
Adenovirus <i>WITH human materials</i>	BSL2	ABSL2	
Adeno-associated virus (AAV) <i>NO helper virus</i>	BSL1	ABSL1	
Adeno-associated virus (AAV) <i>WITH helper virus</i>	BSL2	ABSL2	All work done in biosafety cabinet, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
Baculovirus	BSL1	ABSL1	
Epstein-Barr Virus	BSL2	ABSL2	All work done in biosafety cabinet, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
Herpes Simplex Virus	BSL2	ABSL2	All work done in biosafety cabinet, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
Lentivirus: <i>non-human viruses or non-human pseudo-typed viruses with no oncogenic potential or biotoxin expression</i>	BSL2	ABSL2 72hrs, then ABSL1	All work done in biosafety cabinet, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
Lentivirus: <i>human viruses or human pseudo-typed viruses and/or those with oncogenic potential or biotoxin expression</i>	Enhanced BSL2 per IBC	ABSL2	Enhanced BSL2 work uses BSL3 practices - completion of <i>Enhanced BSL2 Manual</i> , increased PPE, all work in biosafety cabinet, needle protective devices, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
MMLV <i>ectotropic</i>	BSL1	ABSL1	
MMLV <i>amphotropic and those with oncogenic potential or biotoxin expression</i> <i>NO human materials</i>	BSL2	ABSL2 72hrs, then ABSL1	All work done in biosafety cabinet, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
MMLV <i>amphotropic and those with oncogenic potential or biotoxin expression</i> <i>WITH human materials</i>	BSL2	ABSL2	All work done in biosafety cabinet, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste
Rabies SAD-B19	BSL2	ABSL1	
Vaccinia (NYVAC, TROVAC, ALVAC)	BSL1	ABSL1	
Vaccinia (MVA, WR, NYCBOH, Copenhagen, Temple of Heaven, Lister)	BSL2, Enhanced BSL2 per IBC	ABSL2	Vaccination may be required. Enhanced BSL2 work uses BSL3 practices - completion of <i>Enhanced BSL2 Manual</i> , increased PPE, all work in biosafety cabinet, needle protective devices, transport specimen in sealed, labeled secondary container, dispose of as biohazardous waste