

**S3 Table. Permissive or nonpermissive AAV-PHP.eB CNS transduction phenotypes for inbred mouse lines with available WGS data.**

<b>Strain</b>	<b>Enhanced CNS tropism</b>	<b>References</b>
<b>AKR/J</b>	Present	This study
<b>BTBR/T+/Itpr3tf/J</b>	Present	Predicted
<b>C57BL/6J</b>	Present, previously reported	[4–7]
<b>C57BL/6NJ</b>	Present, previously reported	[8]
<b>C57BL/10J</b>	Present	Predicted
<b>C57BR/cdJ</b>	Present	Predicted
<b>C57L/J</b>	Present	This study
<b>C58/J</b>	Present	Predicted
<b>DBA/1J</b>	Present	Predicted
<b>DBA/2J</b>	Present	This study
<b>FVB/NJ</b>	Present	This study
<b>I/LnJ</b>	Present	Predicted
<b>KK/HiJ</b>	Present	Predicted
<b>LP/J</b>	Present	This study
<b>NZW/LacJ</b>	Present	Predicted
<b>RF/J</b>	Present	Predicted
<b>MOLF/EiJ</b>	Present	This study
<b>129P2/OlaHsd</b>	Present	Predicted
<b>129S1/SvImJ</b>	Present	Predicted
<b>129S5SvEvBrd</b>	Present	Predicted
<b>A/J</b>	Absent	Predicted
<b>BALB/cJ</b>	Absent, previously reported	[9]; this study
<b>BUB/BnJ</b>	Absent	Predicted
<b>CAST/EiJ</b>	Absent	This study
<b>CBA/J</b>	Absent	This study
<b>C3H/HeH</b>	Absent	Predicted
<b>C3H/HeJ</b>	Absent	Predicted
<b>LEWES/EiJ</b>	Absent	Predicted
<b>NOD/ShiLtJ</b>	Absent	This study
<b>NZB/B1NJ</b>	Absent	This study
<b>NZO/HILtJ</b>	Absent	Predicted
<b>PWK/PhJ</b>	Absent	This study
<b>SEA/GnJ</b>	Absent	Predicted
<b>SPRET/EiJ</b>	Absent	Predicted
<b>SEA/GnJ</b>	Absent	Predicted
<b>ST/bJ</b>	Absent	Predicted
<b>WSB/EiJ</b>	Absent	Predicted
<b>ZALENDE/EiJ</b>	Absent	Predicted

The lines highlighted in bolded text were used in the analysis presented in Fig 1D.