Supplementary information

Table S1. Percentage nucleotide and amino acid identity with MBLV.

|  | N gene | P gene | M gene | G gene | L gene | Concatenated N+P+M+G+L CDS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Phylogroup I |  |  |  |  |  |  |
| RABV PV-2061 (JX276550.1) | NT: 71.33\% | NT: 49.44\% | NT: 61.29\% | NT: 49.51\% | NT: 66.67\% | NT: 64.80\% |
|  | AA: 81.78\% | AA: $43.25 \%$ | AA: 76.24\% | AA: $50.96 \%$ | AA: 74.57\% | AA: 69.61\% |
| RABV (NC001542.1) | NT: 68.85\% | NT: 49.44\% | NT: 60.70\% | NT: 50.37\% | NT: 66.84\% | NT: 64.81\% |
|  | AA: 81.78\% | AA: 43.25\% | AA: 75.25\% | AA: 50.77\% | AA: 74.57\% | AA: 69.53\% |
| GBLV (NC031988.1) | NT: 67.87\% | NT: 50.05\% | NT: 63.89\% | NT: $48.87 \%$ | NT: 67.94\% | NT: 65.54\% |
|  | AA: $83.11 \%$ | AA: $47.40 \%$ | AA: 78.22\% | AA: 52.11\% | AA: 75.32\% | AA: 70.70\% |
| ABLV (NC003243.1) | NT: 69.31\% | NT: 50.20\% | NT: 62.99\% | NT: 50.00\% | NT: $67.20 \%$ | NT: 65.30\% |
|  | AA: $82.00 \%$ | AA: $45.67 \%$ | AA: 71.78\% | AA: $52.11 \%$ | AA: 74.71\% | AA: 69.75\% |
| KBLV (LR994545.1) | NT: 68.36\% | NT: 50.94\% | NT: 62.24\% | NT: 49.78\% | NT: 68.12\% | NT: 65.65\% |
|  | AA: $82.00 \%$ | AA: 44.98\% | AA: 76.73\% | AA: 50.96\% | AA: 76.59\% | AA: 70.90\% |
| EBLV-2 (NC009528.2) | NT: 67.18\% | NT: 51.58\% | NT: 62.89\% | NT: 49.93\% | NT: 68.06\% | NT: 65.89\% |
|  | AA: $80.89 \%$ | AA: 46.02\% | AA: $77.23 \%$ | AA: 50.38\% | AA: 76.07\% | AA: 70.50\% |
| KHUV (NC025385.1) | NT: 69.11\% | NT: 49.53\% | NT: 62.58\% | NT: 49.75\% | NT: 67.94\% | NT: 65.61\% |
|  | AA: 81.56\% | AA: 45.33\% | AA: 78.71\% | AA: 51.15\% | AA: 76.26\% | AA: 70.84\% |
| BBLV (NC025251.1) | NT: 69.96\% | NT: 49.85\% | NT: 62.24\% | NT: $48.79 \%$ | NT: 68.10\% | NT: 65.81\% |
|  | AA: $82.00 \%$ | AA: 46.37\% | AA: 77.72\% | AA: 51.34\% | AA: $75.93 \%$ | AA: 70.81\% |
| ARAV (NC020808.1) | NT: 69.50\% | NT: 50.51\% | NT: 63.02\% | NT: 48.61\% | NT: 68.26\% | NT: 65.77\% |
|  | AA: 83.56\% | AA: $47.75 \%$ | AA: 77.23\% | AA: $50.77 \%$ | AA: 76.12\% | AA: 71.04\% |
| IRKV (NC020809.1) | NT: 68.88\% | NT: 52.05\% | NT: 65.49\% | NT: $49.13 \%$ | NT: 67.58\% | NT: 65.79\% |
|  | AA: 83.56\% | AA: 44.83\% | AA: $77.72 \%$ | AA: 51.62\% | AA: $75.79 \%$ | AA: 71.03\% |
| EBLV-1 (NC009527.1) | NT: 68.47\% | NT: 50.82\% | NT: 64.10\% | NT: 48.48\% | NT: 68.22\% | NT: 65.81\% |
|  | AA: $82.44 \%$ | AA: $45.21 \%$ | AA: 77.23\% | AA: $50.00 \%$ | AA: 75.88\% | AA: 70.58\% |
| DUVV (NC020810.1) | NT: 69.92\% | NT: 50.51\% | NT: 64.03\% | NT: 48.13\% | NT: 68.29\% | NT: 66.03\% |
|  | AA: $84.22 \%$ | AA: 44.14\% | AA: 76.24\% | AA: 49.43\% | AA: 75.41\% | AA: 70.29\% |
| TWBLV-1 (NC055474.1) | NT: 70.17\% | NT: 49.33\% | NT: 62.92\% | NT: 47.16\% | NT: 67.20\% | NT: 65.22\% |
|  | AA: 83.56\% | AA: 42.07\% | AA: 78.71\% | AA: 48.28\% | AA: 75.98\% | AA: 70.37\% |
| TWBLV-2 (ON437589.1) | NT: 68.47\% | NT: 51.18\% | NT: 62.66\% | NT: 47.67\% | NT: 67.74\% | NT: 65.68\% |
|  | AA: $84.00 \%$ | AA: 45.67\% | AA: 77.23\% | AA: 47.89\% | AA: $75.83 \%$ | AA: 70.53\% |
| PBLV (OQ970171.1) | NT: 67.79\% | NT: 51.33\% | NT: 62.37\% | NT: 48.75\% | NT: 67.85\% | NT: 65.79\% |


|  | AA: 82.89\% | AA: 48.28\% | AA: 79.21\% | AA: 50.77\% | AA: 75.98\% | AA: 71.06\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Phylogroup II |  |  |  |  |  |  |
| LBV (NC020807.1) | NT: 70.10\% | NT: 49.80\% | NT: 64.91\% | NT: 50.65\% | NT: 67.57\% | NT: 66.03\% |
|  | AA: $83.33 \%$ | AA: 44.37\% | AA: 75.25\% | AA: 54.60\% | AA: 75.65\% | AA: 70.92\% |
| MOKV (NC006429.1) | NT: 67.93\% | NT: 50.97\% | NT: 63.25\% | NT: 52.22\% | NT: 67.93\% | NT: 65.96\% |
|  | AA: 83.56\% | AA: 46.42\% | AA: 76.24\% | AA: 53.07\% | AA: 75.04\% | AA: 70.56\% |
| SHIBV (NC025365.1) | NT: 69.88\% | NT: 51.06\% | NT: 64.44\% | NT: 50.55\% | NT: 68.70\% | NT: 66.69\% |
|  | AA: 83.56\% | AA: 46.08\% | AA: 78.71\% | AA: 53.45\% | AA: 76.59\% | AA: 71.71\% |
| Unassigned lyssaviruses |  |  |  |  |  |  |
| IKOV (NC018629.1) | NT: 68.07\% | NT: 55.26\% | NT: 61.14\% | NT: 49.59\% | NT: 65.62\% | NT: 64.21\% |
|  | AA: 79.56\% | AA: 48.08\% | AA: 73.27\% | AA: 48.85\% | AA: 71.97\% | AA: 67.71\% |
| LLEBV (NC031955.1) | NT: 69.00\% | NT: 51.95\% | NT: 64.16\% | NT: 48.96\% | NT: 65.73\% | NT: 64.21\% |
|  | AA: $81.56 \%$ | AA: 46.69\% | AA: 75.25\% | AA: $47.79 \%$ | AA: $72.81 \%$ | AA: 68.30\% |
| WCBV (NC025377.1) | NT: 77.52\% | NT: 71.28\% | NT: 84.90\% | NT: 70.11\% | NT: 78.39\% | NT: 78.94\% |
|  | AA: 95.56\% | AA: 83.16\% | AA: 96.53\% | AA: 86.67\% | AA: 92.76\% | AA: 91.64\% |

Table S2. Percentage nucleotide and amino acid identity with PBLV.

|  | N gene | P gene | M gene | G gene | L gene | Concatenated $\mathbf{N}+\mathrm{P}+\mathrm{M}+\mathrm{G}+\mathrm{L}$ CDS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Phylogroup I |  |  |  |  |  |  |
| RABV PV-2061 (JX276550.1) | NT: 73.25\% | NT: 60.75\% | NT: 67.46\% | NT: 56.81\% | NT: 71.81\% | NT: 70.98\% |
|  | AA: 88.00\% | AA: 58.92\% | AA: $82.18 \%$ | AA: 68.13\% | AA: 83.78\% | AA: 79.92\% |
| RABV (NC001542.1) | NT: 70.98\% | NT: 60.65\% | NT: 65.84\% | NT: 56.63\% | NT: 71.76\% | NT: 70.96\% |
|  | AA: $87.78 \%$ | AA: $58.59 \%$ | AA: $81.19 \%$ | AA: $68.32 \%$ | AA: $83.78 \%$ | AA: 79.83\% |
| GBLV (NC031988.1) | NT: 72.79\% | NT: 61.16\% | NT: 68.07\% | NT: 59.54\% | NT: 73.44\% | NT: 72.31\% |
|  | AA: 89.33\% | AA: 61.82\% | AA: $84.16 \%$ | AA: $69.01 \%$ | AA: 85.94\% | AA: 81.76\% |
| ABLV (NC003243.1) | NT: 71.64\% | NT: 58.98\% | NT: 66.67\% | NT: 57.14\% | NT: 72.31\% | NT: 70.96\% |
|  | AA: $88.44 \%$ | AA: $56.57 \%$ | AA: $80.20 \%$ | AA: $67.62 \%$ | AA: 84.91\% | AA: $80.23 \%$ |
| KBLV (LR994545.1) | NT: 72.64\% | NT: 61.97\% | NT: 71.48\% | NT: 62.80\% | NT: 73.77\% | NT: 73.02\% |
|  | AA: $87.36 \%$ | AA: 61.28\% | AA: $85.15 \%$ | AA: $72.81 \%$ | AA: $88.15 \%$ | AA: 83.46\% |
| EBLV-2 (NC009528.2) | NT: 72.05\% | NT: 60.37\% | NT: $69.49 \%$ | NT: 61.38\% | NT: 73.45\% | NT: 72.49\% |
|  | AA: 86.92\% | AA: 59.26\% | AA: $82.67 \%$ | AA: 73.09\% | AA: 86.98\% | AA: $82.42 \%$ |
| KHUV (NC025385.1) | NT: 72.08\% | NT: 62.55\% | NT: 72.53\% | NT: 60.98\% | NT: 73.85\% | NT: 72.76\% |
|  | AA: $88.47 \%$ | AA: 61.28\% | AA: $86.63 \%$ | AA: 70.72\% | AA: 88.06\% | AA: $83.29 \%$ |
| BBLV (NC025251.1) | NT: 72.86\% | NT: 62.17\% | NT: 70.98\% | NT: 59.98\% | NT: 74.31\% | NT: 73.15\% |
|  | AA: $89.36 \%$ | AA: 61.95\% | AA: $87.13 \%$ | AA: 71.18\% | AA: $87.45 \%$ | AA: 83.23\% |
| ARAV (NC020808.1) | NT: 73.94\% | NT: 62.67\% | NT: 74.84\% | NT: 61.74\% | NT: 74.27\% | NT: 73.40\% |
|  | AA: 90.91\% | AA: 64.31\% | AA: $87.62 \%$ | AA: 71.86\% | AA: $87.73 \%$ | AA: 83.85\% |
| IRKV (NC020809.1) | NT: 71.72\% | NT: 65.12\% | NT: 73.33\% | NT: 60.99\% | NT: 75.06\% | NT: 73.82\% |
|  | AA: $90.24 \%$ | AA: 61.41\% | AA: 90.59\% | AA: $72.90 \%$ | AA: $89.94 \%$ | AA: $85.42 \%$ |
| EBLV-1 (NC009527.1) | NT: 74.56\% | NT: 65.93\% | NT: 74.75\% | NT: 65.49\% | NT: 76.16\% | NT: 75.55\% |
|  | AA: $92.46 \%$ | AA: 67.79\% | AA: $89.60 \%$ | AA: $74.62 \%$ | AA: 91.26\% | AA: 86.92\% |
| DUVV (NC020810.1) | NT: 72.70\% | NT: 62.99\% | NT: 73.09\% | NT: 60.68\% | NT: 74.81\% | NT: 73.70\% |
|  | AA: $90.91 \%$ | AA: 63.09\% | AA: $89.60 \%$ | AA: $71.56 \%$ | AA: $88.67 \%$ | AA: $84.45 \%$ |
| TWBLV-1 (NC055474.1) | NT: 73.46\% | NT: 63.87\% | NT: 71.93\% | NT: 59.23\% | NT: 75.14\% | NT: 73.69\% |
|  | AA: 91.80\% | AA: 63.76\% | AA: 90.59\% | AA: 68.93\% | AA: $89.19 \%$ | AA: $84.51 \%$ |
| TWBLV-2 (ON437589.1) | NT: 72.93\% | NT: 64.87\% | NT: 74.53\% | NT: 62.14\% | NT: 75.35\% | NT: 74.18\% |
|  | AA: 90.91\% | AA: 64.98\% | AA: 90.59\% | AA: 69.98\% | AA: 90.50\% | AA: $85.44 \%$ |
| Phylogroup II |  |  |  |  |  |  |
| LBV (NC020807.1) | NT: 70.84\% | NT: 51.79\% | NT: $64.42 \%$ | NT: 52.38\% | NT: 71.17\% | NT: 68.57\% |
|  | AA: $86.44 \%$ | AA: $44.11 \%$ | AA: $77.72 \%$ | AA: 56.70\% | AA: 81.01\% | AA: $74.82 \%$ |
| MOKV (NC006429.1) | NT: 68.34\% | NT: 51.44\% | NT: $64.97 \%$ | NT: 53.07\% | NT: 70.42\% | NT: 68.03\% |
|  | AA: $84.00 \%$ | AA: $42.91 \%$ | AA: 76.73\% | AA: 57.09\% | AA: 79.78\% | AA: $73.73 \%$ |


| SHIBV (NC025365.1) | NT: 71.39\% | NT: 53.51\% | NT: 66.88\% | NT: 52.30\% | NT: 70.81\% | NT: 68.57\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AA: 86.67\% | AA: 46.28\% | AA: 80.20\% | AA: $57.09 \%$ | AA: 81.48\% | AA: 75.52\% |
| Unassigned lyssaviruses |  |  |  |  |  |  |
| IKOV (NC018629.1) | NT: 67.70\% | NT: 49.89\% | NT: 59.80\% | NT: 46.83\% | NT: 65.36\% | NT: 63.14\% |
|  | AA: 76.67\% | AA: $40.49 \%$ | AA: $73.27 \%$ | AA: 45.96\% | AA: 70.84\% | AA: 65.69\% |
| LLEBV (NC031955.1) | NT: 67.76\% | NT: 51.05\% | NT: 63.73\% | NT: 47.56\% | NT: 65.82\% | NT: 63.87\% |
|  | AA: 78.00\% | AA: 42.05\% | AA: $74.75 \%$ | AA: $45.30 \%$ | AA: $72.91 \%$ | AA: 67.01\% |
| WCBV (NC025377.1) | NT: 68.62\% | NT: 49.28\% | NT: 63.28\% | NT: 50.70\% | NT: $67.53 \%$ | NT: 65.73\% |
|  | AA: $83.33 \%$ | AA: $47.24 \%$ | AA: $78.71 \%$ | AA: 49.43\% | AA: 76.45\% | AA: 71.04\% |
| MBLV (MW653808.1) | NT: 67.79\% | NT: 51.33\% | NT: $62.37 \%$ | NT: 48.75\% | NT: 67.85\% | NT: 65.79\% |
|  | AA: $82.89 \%$ | AA: $48.28 \%$ | AA: $79.21 \%$ | AA: $50.77 \%$ | AA: $75.98 \%$ | AA: 71.06\% |

Table S3. Summary of pathogenic determinants in lyssaviruses.
Amino acid

 DKSTQ 143-147

$\underset{\sim}{\underset{\sim}{x}}$
$\stackrel{n}{8} \stackrel{m}{\square}$
 ~~ ~~~~~ $\stackrel{\infty}{\underset{\sim}{\sim}} \stackrel{\infty}{\underset{\sim}{4}}$ $\begin{array}{ll}\stackrel{N}{\underline{m}} & \underset{\sim}{\infty} \\ & \\ & \end{array}$ ஸั




| $\begin{gathered} \text { MOKV } \\ \text { (NC006429.1) } \end{gathered}$ | F |  | SIQIQ | ASAP | $\underline{K}$ | N |  |  | S | $\underline{N}$ | $\underline{\mathbf{S}}$ | N |  | $\underline{\text { L }}$ |  | D | Q | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { SHIBV } \\ \text { (NCO25365.1) } \end{gathered}$ | F |  | NKSVQ |  | K | N |  |  | I | I | S | N |  | A |  | D | D | $\underline{1}$ |
| Unassigned lyssaviruses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \text { IKOV } \\ \text { (NC018629.1) } \end{gathered}$ | D | W | DKFSQ | APVL |  | $\underline{\mathbf{G}}$ | 1 | Q | A | I | $\underline{\mathbf{S}}$ | $\underline{\mathbf{S}}$ |  | I |  | D |  |  |
| $\begin{gathered} \text { LLEBV } \\ \text { (NCO31955.1) } \end{gathered}$ | N | $\underline{\text { w }}$ | DKATQ | ASAP | $\underline{K}$ | S |  | Q | S | $\underline{T}$ | $\underline{\mathbf{S}}$ | $\underline{S}$ | $\underline{L}$ | I |  | $\underline{\text { S }}$ |  | $\underline{Y}$ |
| $\begin{gathered} \text { WCBV } \\ \text { (NC025377.1) } \end{gathered}$ | F | $\underline{Y}$ | DIAVQ |  |  | N |  |  | I |  | $\underline{\mathbf{S}}$ | $\underline{\mathbf{S}}$ | $\underline{L}$ | ! | I | E |  | $\underline{\mathbf{Y}}$ |
| $\begin{gathered} \text { MBLV } \\ \text { (MW653808.1) } \\ \hline \end{gathered}$ | F | $\underline{Y}$ | DIAIQ |  |  | G |  |  | I |  | $\underline{\text { S }}$ | $\underline{\underline{S}}$ | $\underline{1}$ | I | I | E |  | $\underline{Y}$ |

(MW653808.1)

Table S4. Summary of amino acid changes in antigenic regions on the G protein for lyssaviruses.

| Amino acid position | Site II-b | Site II-a | Site I | Site IV | Site G5 | Site III | Site G1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 34-42 | 198-200 | 226-231 | 251 | 261-264 | 330-338 | 342-343 |
|  | Phylogroup I |  |  |  |  |  |  |
| RABV PV-2061 <br> (JX276550.1) | GCTNLSGFS ${ }^{\text {A }}$ | KRA ${ }^{\text {d }}$ | KLCGVL ${ }^{\text {G }}$ | $\mathrm{W}^{\text {L }}$ | HDFR ${ }^{N}$ | KSVRTWNEI ${ }^{\text {R }}$ | $\mathrm{KG}^{\text {T }}$ |
| $\begin{gathered} \text { RABV } \\ \text { (NC001542.1) } \end{gathered}$ | GCTNLSGFSA | KRA ${ }^{\text {D }}$ | KLCGVL ${ }^{\text {G }}$ | $\mathrm{W}^{\text {L }}$ | HDFR ${ }^{N}$ | KSVRTWNEI ${ }^{\text {R }}$ | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { GBLV } \\ \text { (NC031988.1) } \end{gathered}$ | GCTSLSGFS ${ }^{\text {B }}$ | KKA ${ }^{\text {E }}$ | KLCGIS ${ }^{\text {+ }}$ | W ${ }^{\text {L }}$ | HDF $\underline{H}{ }^{\circ}$ | KSVRAWNEI | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { ABLV } \\ \text { (NC003243.1) } \end{gathered}$ | GCTSLSGFS ${ }^{\text {B }}$ | KKA ${ }^{\text {E }}$ | KLCGIS ${ }^{\text {H }}$ | W ${ }^{\text {L }}$ | HDFN | KSVRTWDEI | KG ${ }^{\text {T }}$ |
| KBLV (LR994545.1) | GCTILSAFS | KRA ${ }^{\text {d }}$ | KLCGIS ${ }^{\text {+ }}$ | $\mathrm{W}^{\text {L }}$ | HDF $\underline{H}{ }^{\circ}$ | KSIRDWTEI | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { EBLV-2 } \\ \text { (NC009528.2) } \end{gathered}$ | GCTILTVFS | KKA ${ }^{\text {E }}$ | KLCGIS ${ }^{\text {H }}$ | $\mathrm{W}^{\text {L }}$ | HDF $\underline{H}^{\text { }}$ | KSIREWTDV | KG ${ }^{\text {T }}$ |
| $\begin{aligned} & \text { KHUV } \\ & \text { (NC025385.1) } \end{aligned}$ | GCTILSGFT | KRA ${ }^{\text {D }}$ | KLCGVS ${ }^{\text { }}$ | W ${ }^{\text {L }}$ | HDFH ${ }^{\circ}$ | KSIREWSEI | KG ${ }^{\text {T }}$ |
| BBLV (NC025251.1) | GCTNLSGFT | KKA ${ }^{\text {E }}$ | KLCGVS ${ }^{\text {¹ }}$ | $\mathrm{W}^{\text {L }}$ | HDFH ${ }^{\text { }}$ | KSIRQWTEI | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { ARAV } \\ \text { (NC020808.1) } \end{gathered}$ | GCTILTAFS | KKA ${ }^{\text {E }}$ | KLCGVM | W ${ }^{\text {L }}$ | HDF ${ }^{\text { }}$ | KSVREWTEV | KG ${ }^{\text {T }}$ |
| IRKV (NC020809.1) | GCTTLTAFN | KKA ${ }^{\text {E }}$ | KLCGMA | W ${ }^{\text {L }}$ | HDFH ${ }^{\text { }}$ | KSIREWKEI ${ }^{\text {S }}$ | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { EBLV-1 } \\ \text { (NC009527.1) } \end{gathered}$ | GCTILTPFS ${ }^{\text {c }}$ | KḰa ${ }^{\text {E }}$ | RLCGVP | W ${ }^{\text {L }}$ | HDF $\underline{H}{ }^{\circ}$ | KSVREWKEV | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { DUVV } \\ \text { (NC020810.1) } \end{gathered}$ | GCTILTPFSC | KKA ${ }^{\text {E }}$ | RLCGIS | $\mathrm{W}^{\mathrm{L}}$ | HDF $\underline{H}^{\circ}$ | KSVREWKEI ${ }^{\text {S }}$ | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { TWBLV-1 } \\ \text { (NC055474.1) } \end{gathered}$ | GCNTLSSFS | KMA | KLCGIS ${ }^{\text {H }}$ | $\underline{\text { P }}$ | HDFR ${ }^{N}$ | RSIRNWTEV | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { TWBLV-2 } \\ \text { (ON437589.1) } \end{gathered}$ | GCNTLTPFS | SMA | KLCGIS ${ }^{\text {H }}$ | Q | HDFR ${ }^{N}$ | KSVRNWTEV | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { PBLV } \\ \text { (OQ970171.1) } \end{gathered}$ | ECTILTPFS | KRA ${ }^{\text {D }}$ | KLCGIS ${ }^{\text {r }}$ | $\mathrm{W}^{\text {L }}$ | HSFP | KSIREWKDI | KG ${ }^{\text {T }}$ |
| Phylogroup II |  |  |  |  |  |  |  |
| LBV (NC020807.1) | GCSETSSFT | RKA | TLCGK ${ }^{\text {P }}$ | W ${ }^{\text {L }}$ | H $\mathbf{N N R}^{\text {P }}$ | KRVDNWVDI | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { MOKV } \\ \text { (NC006429.1) } \end{gathered}$ | GCNAESSFT | KKA ${ }^{\text {E }}$ | TLCG표 | $\mathrm{W}^{\text {L }}$ | HNDR | KRVDKWADI | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { SHIBV } \\ \text { (NC025365.1) } \end{gathered}$ | GCSSSSTFS | KKS | TLCGK ${ }^{\text { }}$ | W ${ }^{\text {L }}$ | HNNR ${ }^{\text {P }}$ | KRVDRWEEI | KG ${ }^{\text {T }}$ |


| Unassigned lyssaviruses |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IKOV (NC018629.1) | GCNEGSKVS | ILL | IICGKS | $\underline{\text { M }}$ | HTVK | KSVDNWTDI | PIU |
| $\begin{gathered} \text { LLEBV } \\ \text { (NC031955.1) } \end{gathered}$ | NCTDHGEIN | RLF | TICGKS | $\underline{\mathbf{V}}^{\mathrm{M}}$ | HTTK | KSVSNWSEI | PIU |
| $\begin{gathered} \text { WCBV } \\ \text { (NC025377.1) } \end{gathered}$ | $\underline{\mathrm{Y} C \text { TTEQSIT }}$ | KLV ${ }^{\text {F }}$ | $\underline{S I C G R Q}^{\text {K }}$ | $\underline{V}^{\mathrm{M}}$ | HDIK ${ }^{\text {Q }}$ | IKVENWSEV | KG ${ }^{\text {T }}$ |
| $\begin{gathered} \text { MBLV } \\ \text { (MW653808.1) } \\ \hline \end{gathered}$ | DCTSEQSIT | KLV ${ }^{\text {F }}$ | $\underline{S I C G R Q}^{\text {K }}$ | A | HDIK ${ }^{\text {Q }}$ | IKVENWSDI | KG ${ }^{\text {T }}$ |

Amino acid changes from the amino acid sequence for RABV PV-2061 (JX276550.1) are underlined and highlighted if the change affects the characteristics of the amino acid.
Identical antigenic sites are indicated from A-U.

