$$
\begin{aligned}
\hat{R}_x(\theta) &= \cos(\theta/2)\big(|0\rangle\langle 0| + |1\rangle\langle 1|\big) - \mathrm{i}\sin(\theta/2)\big(|1\rangle\langle 0| + |0\rangle\langle 1|\big) &&= \mathrm{e}^{-\mathrm{i}\hat{\sigma}_x\theta/2} \\
\hat{R}_y(\theta) &= \cos(\theta/2)\big(|0\rangle\langle 0| + |1\rangle\langle 1|\big) + \sin(\theta/2)\big(|1\rangle\langle 0| - |0\rangle\langle 1|\big) &&= \mathrm{e}^{-\mathrm{i}\hat{\sigma}_y\theta/2} \\
\hat{R}_z(\theta) &= \mathrm{e}^{-\mathrm{i}\theta/2}|0\rangle\langle 0| + \mathrm{e}^{\mathrm{i}\theta/2}|1\rangle\langle 1| &&= \mathrm{e}^{-\mathrm{i}\hat{\sigma}_z\theta/2}
\end{aligned}
$$