$$K_{51}^{1} = \begin{bmatrix} 0 & 0 & -\mathbf{i}\sqrt{6} & 0 \\ 0 & 0 & \frac{\left(-3-\mathbf{i}\sqrt{3}\right)U}{\sqrt{2}\,t} & \frac{3-\mathbf{i}\sqrt{3}}{\sqrt{2}} \\ -\mathbf{i}\sqrt{6} & \frac{\left(3-\mathbf{i}\sqrt{3}\right)U}{\sqrt{2}\,t} & \mathbf{i}\sqrt{3} & \frac{\frac{-\mathbf{i}}{2}\left(-3\,\mathbf{i}+\sqrt{3}\right)U}{t} \\ 0 & \frac{-3-\mathbf{i}\sqrt{3}}{\sqrt{2}} & \frac{\left(3-\mathbf{i}\sqrt{3}\right)U}{2\,t} & \mathbf{i}\sqrt{3} \end{bmatrix}$$