$$(\nabla f_{\text{R\acute{e}nyi}})_{i,j,k,l} = \frac{\alpha}{1-\alpha} \sum_{\mu}^{1} \frac{1}{\sum_{\mu}^{2\alpha}} \cdot \begin{pmatrix} X & S^{2\alpha-1} & Y^* & & & \\ & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & &$$