

**Supplementary Figure 8.** Effects of experimental manipulation of phosphorylation status on activity of the mitochondrial Complex IV from *C. gigas* from different oxygen conditions.

Experimental treatments: Stop – proteins in the native state extracted in the presence of inhibitors of phosphatases and kinases, CeO<sub>2</sub> – cerium oxide treated homogenates, cAMP – homogenates treated with cAMP to stimulate endogenous protein kinase A; PMA – homogenates treated with phorbol myristate acetate to stimulate endogenous protein kinase C. Enzymatic activities are expressed as percent of the native activity under the normoxic conditions (corresponding to “Stop” in A). Black broken line corresponds to 100% (i.e. the native activity under the normoxic conditions), red solid line shows the maximum activity measured in cAMP-stimulated extracts under the normoxic conditions. The vertical bars represent S.E.M. N=6.

