An inhibitory role of Arg-84 in anion channelrhodopsin-2 expressed in

Escherichia coli

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SUPPLEMENTARY INFORMATION

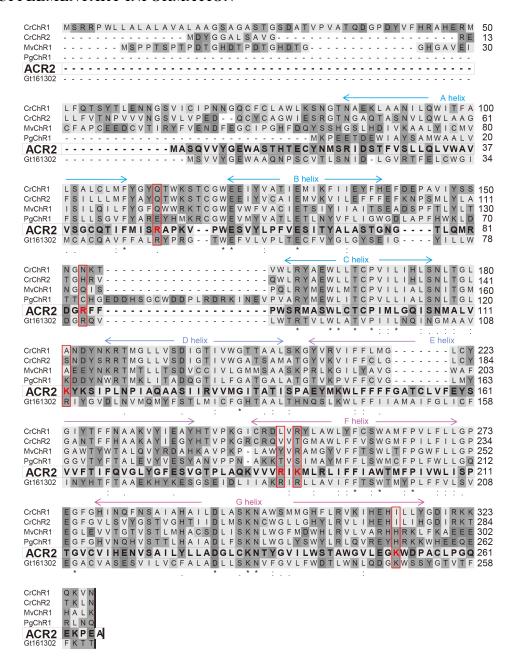


Figure S1. Amino acid sequence alignment of ChR-like proteins.

Seven TM helices are indicated as A, B, C, D, E, F and G. ACR2 from *G. theta* (GtACR2) focused on in this study is highlighted in bold characters and the mutated basic amino acid residues are shown in red.

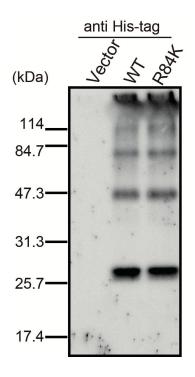


Figure S2. Western blot analysis for wild-type (WT) and R84K mutant of ACR2.

The protein was expressed in *E. coli* BL21(DE3) cells with a His-tag at the C-terminus and was detected using an anti His-tag antibody. Cells harboring the pET22b vector plasmid alone were used as a negative control (vector).