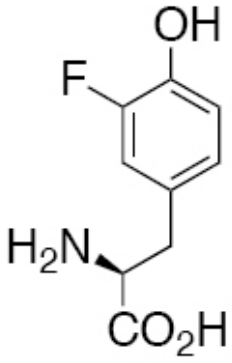
Supplemental Figure 1 – Structure of 3-fluorotyrosine. The fluorinated tyrosine analog used in this study differs from tyrosine in that the hydrogen ortho to the hydroxyl group has been substituted with fluorine.



Supplemental Figure 2 - Functional characterization of F-tyrosine-labeled proteins used in this study. (A) Cl^- efflux from proteoliposomes (pH 5.0) was initiated with the addition of valinomycin. At the end of the experiment, Triton X-100 was added to lyse the vesicles and release all of the Cl^-. Examples of raw traces (top) and summary of unitary Cl^- turnover rates calculated from similar experiments (bottom) are shown. Cl^- flux of unlabeled wild-type ClC-ec1 at pH 5.0 is shown for comparison. All other functional experiments were performed using proteins labeled with F-tyrosine as described in "Methods." (B) H^+ pumping by F-tyr-labeled proteins was initiated by addition of valinomycin and monitored over time. At the end of the experiment, the H^+ gradient was collapsed by the addition of FCCP. Top: examples of raw traces. Bottom: initial rate of H^+ flux calculated from similar traces similar to those shown above. Summary data in both panels represent the mean +/- SE of at least 3 measurements.