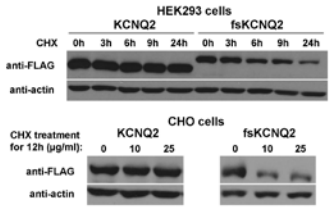
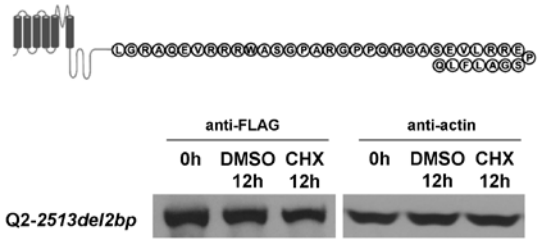
Supplementary Figure Legends

Supplemental Fig.1



S figure 1. Accelerated degradation of fsKCNQ2 mutant proteins in HEK293 and CHO cells. Upper panels, transfected HEK293 cells were treated with CHX (75 μg/ml) for various time periods (0, 3, 6, 9 or 24 h). Proteins were extracted and separated by SDS-PAGE before Western blotted with anti-FLAG or -actin antibody. Lower panels, transfected CHO cells were treated with CHX at 10 or 25 μg/ml for 12 hours, and proteins were extracted and separated by SDS-PAGE before Western blotted with anti-FLAG or -actin antibody.

Supplemental Fig.2



S figure 2. The ExtraC peptide is a specific degradation signal for fsKCNQ2. Cos-7 cells expressing FLAG -Q2-*2513del2bp* mutant proteins were treated with CHX (75 μg/ml) for 0 or 12 h, or with vehicle (0.75‰ DMSO) for 12 h. Extracted proteins were separated by SDS-PAGE and Western blotted with anti-FLAG or anti-actin antibody. The schematic picture shows that the extra C-terminal region of FLAG -Q2-*2513del2bp* mutant doesn't contain the RCXRG motif. The data were obtained from the same experiment with positive and negative control (KCNQ2 & fsKCNQ2) of Figure 6.