



Figure S1. Functional characterization of NGFP-hTRPC6 and hTRPC3 and purification of NGFP-hTRPC6.

(a) Activation effect of OAG on NGFP-hTRPC6 constructs, measured by FLIPR membrane potential assay ($n=3$). (b) Inhibition effect of the BTDM on NGFP-hTRPC6 constructs ($n=3$). (c) Whole cell currents of hTRPC3 evoked by OAG were inhibited by BTDM in sub- IC_{50} concentration. Solid and hollow circles represent currents at -100mV and +100mV respectively. (d) Activation effect of OAG on the non-tagged hTRPC3 construct ($n=3$). (e) Inhibition effect of the BTDM on the non-tagged hTRPC3 construct ($n=3$). (f) Representative size-exclusion chromatography of hTRPC6 reconstituted into nanodiscs. Fractions between dashed lines contain hTRPC6 in nanodiscs. (g) SDS-PAGE of size-exclusion chromatography peak fractions. Fractions denoted by asterisks were pooled for cryo-EM analysis.