

Expanded View Figures

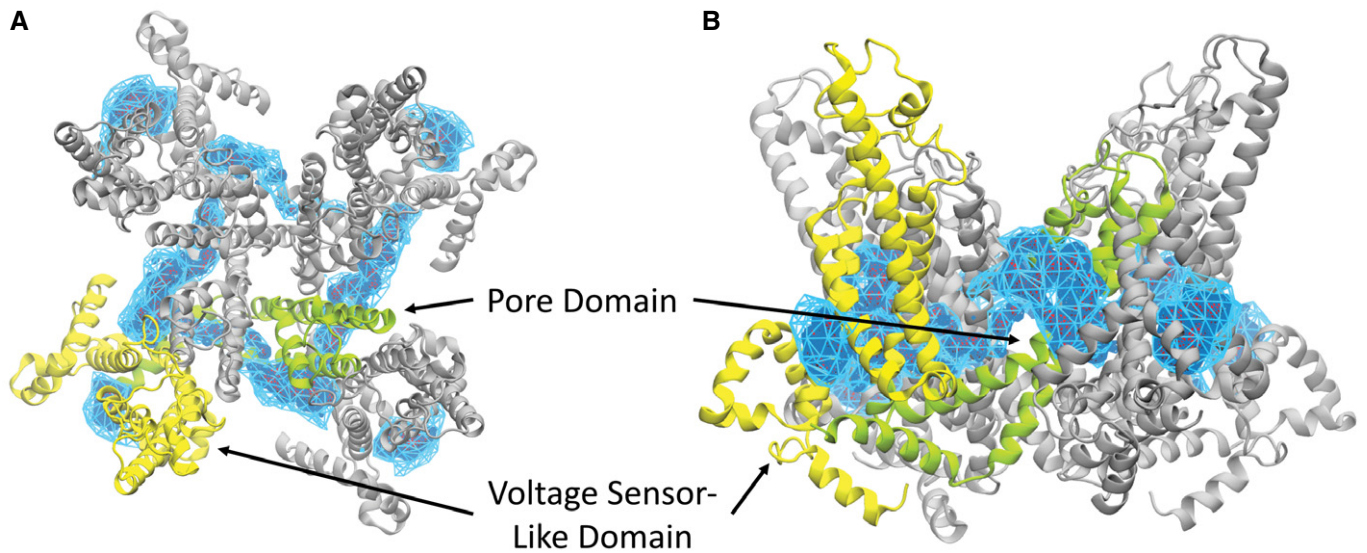


Figure EV1. Three-dimensional density maps showing DAG interaction with TRPC3.

A, B TRPC3 is shown in gray, with one subunit highlighted in yellow (voltage sensor-like domain) and green (pore domain). Blue represents DAG density. (A) Top view (B) Side view.

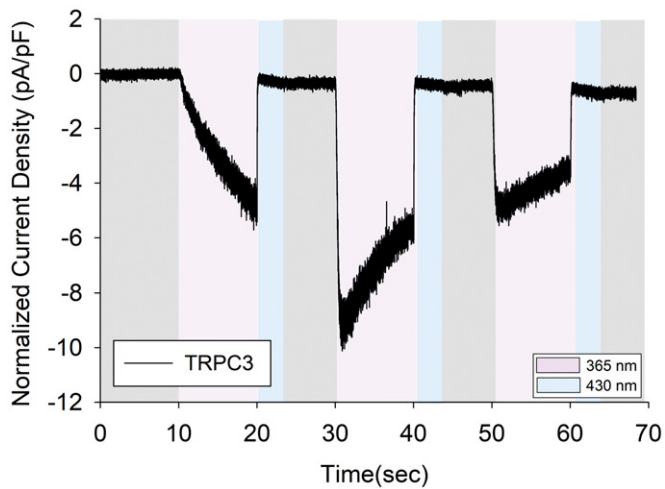


Figure EV2. Time course of WT TRPC3 during 3 repetitive activating photocycles.

Representative recordings showing the inward currents induced by 3 repetitive photoactivation of OptoDAR_G (20 μ M) in a whole-cell, gap-free recording (holding potential: -40 mV, normalized by capacitance) in TRPC3-WT-expressing HEK293 cells. 100% intensity of UV: 365 nm for 10 s (violet), blue light: 430 nm for 10 s (blue).

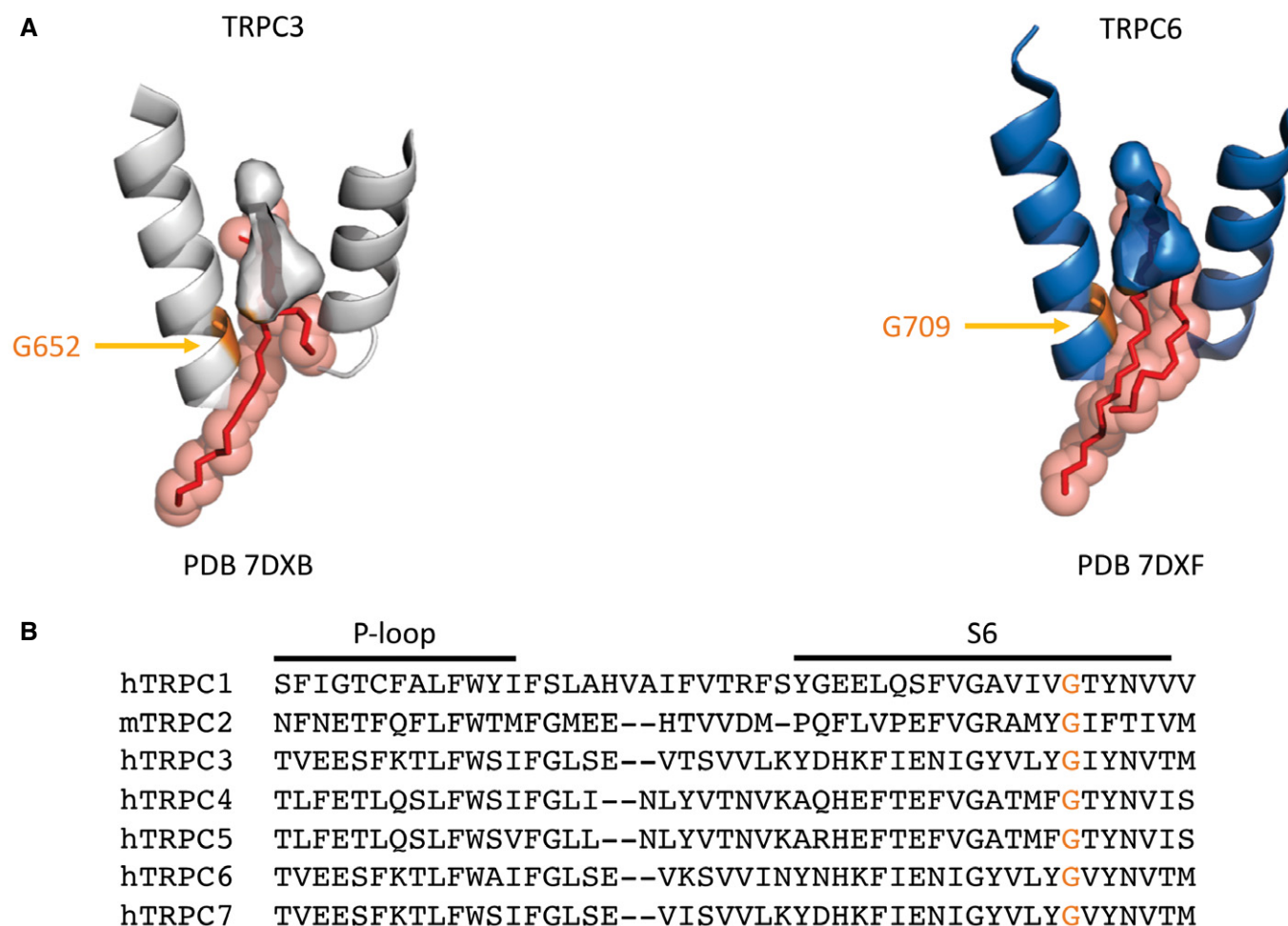


Figure EV3. Highly conserved DAG accommodation site in TRPC channels.

A L2 binding site structure of TRPC3 (hTRPC3 PDB ID: 7DXB; Guo *et al*, 2022) and hTRPC6 (PDB ID: 7DXF; Guo *et al*, 2022). G652 in TRPC3 and homologous G709 in TRPC6 highlighted orange.

B Gly residue involved in DAG accommodation in L2 site in TRPC3 aligned with other TRPCs and highlighted orange. Sequence alignment of TRPCs according to Fan *et al* (2018).