Video 1. TIRF localization and dynamics: α4-eGFPβ2wt nAChRs. Neuro-2a cell cotransfected with α4-eGFP plus β2wt. nAChRs display ER plus membrane-localized receptors with no vesicular dynamics. TIRF images at a frame rate of 5/s; total time is 26 s.

Video 2. TIRF localization and dynamics: α4-eGFPβ4wt nAChRs. Neuro-2a cell cotransfected with α4-eGFP plus β4wt. nAChRs display membrane-localized nAChRs with many pleomorphic vesicles. TIRF images at a frame rate of 5/s; total time is 55 s.

Video 3. TIRF localization and dynamics: α4-eGFPβ2 double-mutant nAChRs. nAChRs display membrane-localized nAChRs with many pleomorphic vesicles. TIRF images at a frame rate of 5/s; total time is 48 s.

Video 4. ERES and nAChRs. Neuro-2a cell cotransfected with α4-mcherry plus β2wt plus Sec24D-eGFP. No drug; 0.1 μM nicotine for 48 h (see Video 5). Note that the nAChRs move near, and in some cases past or through, the clusters of Sec24D. TIRFM images at a frame rate of 5/s; total time is 118 s.

Video 5. ERES and nAChRs. Neuro-2a cell cotransfected with α4-mcherry plus β2wt plus Sec24D-eGFP. No drug (see Video 4); 0.1 μM nicotine for 48 h. Note that the nAChRs move near, and in some cases past or through, the clusters of Sec24D. TIRFM images at a frame rate of 5/s; total time is 118 s.