

Supplemental Figure S1. Isolation of [<sup>125</sup>I]TID-labeled  $\delta$ M1 and  $\delta$ M2 by Tricine SDS-PAGE and reversed phase-HPLC fractionation of EndoLys-C digests of  $\delta$  subunits. Delta subunits were isolated from purified nAChRs photolabeled with [<sup>125</sup>I]TID in the absence (-Carb, O) or presence of agonist (+Carb, •). A, a phosphor image of the Tricine gel fractionation of the EndoLys-C digests of the  $\delta$  subunits. B, the major radioactive bands, which run with an apparent molecular mass of 14 kDa, were excised, and the peptides recovered from those bands were fractionated by reversed-phase HPLC, as described under "Experimental Procedures". The elution of peptides was monitored by the absorbance at 215 nm (solid lines) and fluorescence (dashed line), and the <sup>125</sup>I in each fraction was determined by  $\gamma$ -counting (O, •). Sequence analysis of the pools of fractions 27-30, which contained a fragment beginning at the N-terminus of  $\delta$ M2, are shown in Figures 1C and 1D. Sequence analysis of the pools of fractions 23-25 (Figure 2C) identified a fragment beginning at  $\delta$ Phe206 that extended through  $\delta$ M1.



Supplemental Figure S2. Reversed-phase HPLC fractionation of V8 protease digests of  $\delta$  subunits isolated from purified nAChRs photolabeled with [<sup>125</sup>I]TID in the absence (-Carb, O) or presence of agonist (+Carb,  $\bullet$ ). The elution of peptides was monitored by the absorbance at 215 nm (solid lines) and fluorescence (dashed line), and the <sup>125</sup>I in each fraction was determined by  $\gamma$ -counting (O,  $\bullet$ ). To identify labeling in the  $\delta$ M2-M3 loop HPLC fractions were pooled for sequencing (Figure 2D) with the samples treated with OPA at sequencing cycle 6 to prevent further sequencing of any peptide not containing a proline in cycle 6 of Edman degradation.