



**Figure 2-5. Proteolytic mapping of sites of [<sup>3</sup>H]ethidium diazide incorporation into the nAChR  $\alpha$ -subunit using *S. aureus* V8 protease.**

nAChR-rich membranes (800  $\mu$ g) were labeled with [<sup>3</sup>H]ethidium diazide in the presence of 10 mM oxidized glutathione and 2 mM carbamylcholine and the absence (lanes 1 & 2) or presence (lanes 3 & 4) of PCP and split for incubation with (lanes 2 & 4) or without (lanes 1 & 3) EndoglycosidaseH as described in methods. After incubation membranes were submitted to SDS-PAGE, and the  $\alpha$ -subunit was excised. The excised bands were transferred to the well of a 15% mapping gel and digested with V8 protease as described in methods. A, mapping gel stained with Coomassie Blue. B, fluorogram of mapping gel, exposed for 6 weeks. The mobility of the proteolytic fragments is indicated on the left. The incorporation in each polypeptide was additionally measured by scintillation counting of excised gel pieces. Incorporation in the presence of carbamylcholine (+/-) or the presence of carbamylcholine and PCP (++) in each  $\alpha$ -subunit fragment:  $\alpha$ V8-20: +/- : 2271 cpm, ++: 832 cpm;  $\alpha$ V8-18: +/-: 390 cpm, ++: 181 cpm;  $\alpha$ V8-10 (including  $\alpha$ V8-12): +/-: 346 cpm, ++: 251 cpm ( $\alpha$ V8-12: +/-: 262 cpm; ++: 185 cpm);  $\alpha$ V8-4: +/-: 43 cpm, ++: 26 cpm. +EndoH:  $\alpha$ V8-20: +/-: 1618 cpm, ++: 533 cpm;  $\alpha$ V8-18: +/-: 126 cpm, ++: 60 cpm;  $\alpha$ V8-10 (including  $\alpha$ V8-12): +/-: 38 cpm, ++: 45 cpm ( $\alpha$ V8-12: +/-: 282 cpm, ++: 210 cpm);  $\alpha$ V8-4: +/-: 27 cpm, ++: 23 cpm. Shown above is a schematic indicating the positions of the four fragments within the primary structure of the nAChR  $\alpha$  subunit.