

acetic acid solution and material eluting between 37 and 50 mL was pooled and lyophilized to yield 132 mg (92%, overall yield 85%) of homogeneous HRP-54.

Acetylthreonylprolylserylproline (HRP-55). One-half of the α -amino-deprotected tetrapeptidyl-resin (1.53 g prepared in the synthesis of HRP-54 was acetylated by using standard procedures. After HF cleavage and extraction, 84% of the radioactive label was found in the 1% AcOH extract, which was lyophilized to yield 168 mg (108%) of crude peptide. This was gel filtered and material eluting between 37 and 50 mL was pooled and lyophilized to yield 147 mg (88%, overall yield 94%) of homogeneous HRP-55.

Threonylprolylserylprolinamide (HRP-56). *p*-Methylbenzhydrylamine-resin (3 g) containing 1.41 mmol of attachment sites was used for the synthesis of HRP-56. After addition of the amino acid residues, 1.02 g of α -amino-deprotected tetrapeptidyl-resin was cleaved with HF. The 1% AcOH extract was lyophilized to yield 176 mg (91%) of crude peptide. This was gel filtered (G-15), and fractions eluting between 40 and 45 mL were pooled and lyophilized to yield 132 mg (75%, overall yield 68%) of homogeneous HRP-56.

Acetylthreonylprolylserylprolinamide (HRP-57). *p*-Methylbenzhydrylamine-resin (3 g) containing 1.41 mmol of attachment sites was used for the synthesis of HRP-57. After addition of the amino acid residues, the peptidyl-resin was acetylated as before. After HF cleavage of 3.46 g of the peptidyl resin, the 1% acetic acid extract (70% radioactivity) and the 5% acetic acid extract (23% radioactivity) were pooled and lyophilized to yield 659 mg (91%) of crude peptide. This was gel filtered (G-15) in 10% AcOH solution, and fractions eluting between 60 and 76 mL were pooled and lyophilized to yield 574 mg (87%, overall yield 79%) of homogeneous HRP-57.

Prolylserylprolyls erine (HRP-77). Resin containing 0.69 mmol of serine was used for the synthesis of HRP-77. After addition of the amino acid residues, 2.97 g of tetrapeptidyl-resin was treated with HF-anisole. After evaporation and extraction, 91% of the label was found in the 1% AcOH extract, which was lyophilized to yield 248 mg (94%) of crude HRP-77. This was gel filtered on Sephadex G-15 and material eluting between 42 and 54 mL was pooled and lyophilized to yield 208 mg (84%, overall yield 79%) of homogeneous HRP-77.

Acetylprolylserylprolyls erine (HRP-76). Resin containing 0.69 mmol of serine was used for the synthesis of HRP-76. After addition of the remaining amino acid residues, 3.11 g of tetrapeptidyl-resin was cleaved with HF-anisole. After evaporation and extraction, 97% of the label was found in the 1% AcOH

extract, which was lyophilized to yield 303 mg (99%) of crude peptide. This was gel filtered on Sephadex G-15 and material eluting between 53 and 68 mL was pooled and lyophilized to yield 254 mg (84%, overall yield 83%) of homogeneous HRP-76.

Prolylserylprolyls erineamide (HRP-9). *p*-Methylbenzhydrylamine-resin containing 1.41 mmol of attachment sites was used for the synthesis of HRP-9. After addition of the amino acid residues, 3.11 g of peptidyl polymer was cleaved with HF-anisole. After evaporation and extraction, 95% of the radioactivity was found in the 1% AcOH extract, which was lyophilized to yield 471 mg (83%) of crude HRP-9. This was gel filtered on Sephadex G-15 and material eluting between 54 and 59 mL was pooled and lyophilized to yield 419 mg (89%, overall yield 74%) of homogeneous HRP-9.

Acetylprolylserylprolyls erineamide (HRP-10). *p*-Methylbenzhydrylamine-resin containing 1.41 mmol of attachment sites was used for the synthesis of HRP-10. After addition of the amino acid residues, 3.00 g of tetrapeptidyl-resin was treated with HF-anisole. After evaporation and extraction, 92% of the radioactivity was found in the 1% acetic acid wash, which was lyophilized to yield 522 mg (86%) crude HRP-10. This was gel filtered on Sephadex G-15 and material eluting between 59 and 82 mL was pooled and lyophilized to yield 470 mg (90%, overall yield 77%) of homogeneous HRP-10.

Acknowledgment. This work was supported by NIDR Grant DE-07257. Amino acid analyses were performed by G. Crombie, Department of Biochemistry, Boston University Medical School, Boston, MA. Help with peptide purification was supplied by V. Ahya, Boston University Medical School, Boston, MA.

We are particularly grateful to our collaborators, Prof. I. Siemion and Dr. A. Pedyczak of the Institute of Chemistry, University of Warsaw, Warsaw, Poland, for allowing citation of their studies on the conformation of the tetrapeptide inhibitors.

Registry No. HRP-7, 117928-94-6; HRP-8, 117928-96-8; HRP-9, 117929-00-7; HRP-10, 121288-65-1; HRP-42, 117943-73-4; HRP-43, 117928-98-0; HRP-44, 117928-97-9; HRP-45, 117928-99-1; HRP-46, 121269-83-8; HRP-47, 121269-84-9; HRP-48, 121269-85-0; HRP-49, 121269-86-1; HRP-54, 117943-74-5; HRP-55, 121269-87-2; HRP-56, 121269-88-3; HRP-57, 121269-89-4; HRP-65, 117928-93-5; HRP-66, 117928-95-7; HRP-76, 121269-90-7; HRP-77, 121269-91-8; HRP-81, 121269-81-6; HRP-82, 121269-82-7; HRP-131, 121269-79-2; HRP-132, 121269-80-5; EC 3.4.24.13, 72231-73-3.

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