

The creation of a peptide linkage between two amino acid segments is one of the most important reactions in organic and bioorganic chemistry. Many different strategies have been devised for selective amide bond formation from a carboxylic acid and an amino group, usually involving protection, activation, coupling and deprotection steps. The reagents listed in this section have been used in one or other of these steps in the synthesis of peptide molecules. An enormous body of literature exists on the subject of peptide synthesis, of which a selection of books and review articles is listed.<sup>1-12</sup>

## Protecting group reagents

To ensure specific coupling between the required carboxyl and amino groups, a range of protecting groups have been developed which can be selectively introduced and removed. References to methods of protection and deprotection can be found under specific items in the main Catalogue. Further information on the use of protecting groups in peptide synthesis can be found in the general references on peptide synthesis and in other specialist sources.<sup>13-15</sup>

## CARBOXYL PROTECTION

Although a wide variety of esters and other groups have been used for the protection of carboxylic acids, only a limited number of these find significant use in peptide synthesis.

### tert-Butyl ester

**L08855** tert-Butyl acetate

**L00431** N,N-Dimethylformamide di-tert-butyl acetal

**B22039** tert-Butyl 2,2,2-trichloroacetimidate

**L12338** tert-Butanol

### 1-Adamantyl ester

**A10209** 1-Adamantanol

### Dicyclopropylmethyl ester

**L01816** Dicyclopropylmethanol

### Benzylic esters

**A15188** 9-Anthracenemethanol

**L03292** Benzyl alcohol

**A13535** Benzyl bromide

**A12481** Benzyl chloride

**A13579** 9-(Chloromethyl)anthracene

**A12859** 4-(Chloromethyl)pyridine hydrochloride

**A15212** 9-Fluorenylmethanol

**A15559** 4-Methoxybenzyl alcohol

**A15742** 4-Nitrobenzyl alcohol

**A13127** 2-Nitrobenzyl bromide

**A15236** 4-Nitrobenzyl bromide

**A15749** 4-Nitrobenzyl chloride

**L00555** 2,3,4,5,6-Pentamethylbenzyl chloride

**A14698** Pyridine-4-methanol

**L00423** 2,4,6-Trimethylbenzyl chloride

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