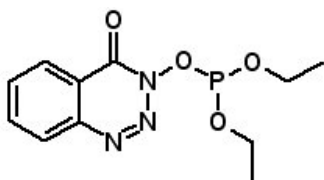




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## Fmoc-(Fmoc-Hmb)Ala-OH and Fmoc-(Fmoc-Hmb)Val-OH Apex 396 Parallel Solid Phase Peptide Synthesizer



AAPPTec has added Fmoc-(Fmoc-Hmb)Ala-OH and Fmoc-(Fmoc-Hmb)Val-OH to its selection of products for improving the synthesis of difficult peptides. This expands the utility of peptide backbone protection and allows it to be applied in a greater range of sequences.

Fmoc-(Fmoc-Hmb)amino acids from AAPPTec are of the highest quality at very competitive prices.



Catalog Number	Product	1g	5g
NFA001	Fmoc-(Fmoc-Hmb)Ala-OH	\$195	\$595
NFG001	Fmoc-(Fmoc-Hmb)Gly-OH	\$195	\$595
NFL001	Fmoc-(Fmoc-Hmb)Leu-OH	\$195	\$595
NFF001	Fmoc-(Fmoc-Hmb)Phe-OH	\$195	\$595
NFV001	Fmoc-(Fmoc-Hmb)Val-OH	\$195	\$595

These Fmoc-(Fmoc-Hmb)amino acids are also available in bulk quantities. E-mail AAPPTec at [sales@aapptec.com](mailto:sales@aapptec.com) for a quotation.

## Fmoc-(Fmoc-Hmb)-Amino Acids

Fmoc-(Fmoc-Hmb)amino acids were introduced in the 1990s to improve synthetic yields of difficult peptides such as amyloid  $\beta$  that form aggregates during synthesis. The Hmb

The Apex 396 parallel peptide synthesizer is the ideal peptide instrument for preparing scan libraries, truncation libraries, and deletion libraries for structure-activity analysis. It is also the optimal synthesizer for preparing screening libraries of peptides containing unusual amino acids or multiple D-amino acid substitutions. The Apex 396 can prepare and cleave up to 96 discrete peptides in 50 to 100 micromole scale, all at the same time. Other reactor assemblies with 40, 16 or 8 reactors are available for preparing peptides on larger scales.

The Apex 396 standard amino acid rack can hold up to 36 different amino acids, enough to accommodate all of the L-, D- and unusual amino acids required for most synthesis projects. Optional racks with greater capacity are available for larger projects.

The Apex 396 parallel peptide synthesizer has optional features that accelerate the preparation of large peptide libraries. The Fast Wash feature provides rapid delivery of wash solvents to each reactor well. Combined with the optional 6-probe Multiprobe, the Fast Wash feature provides significant time savings when washing a full 96 well reactor assemble.

For more information about Apex 396 features and options, visit the AAPPTec website at [www.aapptec.com](http://www.aapptec.com) or e-mail AAPPTec at [sales@aapptec.com](mailto:sales@aapptec.com).

groups replace amide hydrogen atoms in the peptide backbone, disrupting the peptide backbone hydrogen bonding responsible for aggregation. Coupling to Hmb-protected amino acids is relatively easy in spite of the fact that the amino acid is N-substituted. Coupling probably occurs on the 2-OH of the Hmb group followed by O→N acyl shift. The Hmb group is removed by acid treatment. TFA cleavage of the product peptide from Wang or Rink Amide resins will simultaneously remove the backbone protection. The Hmb protecting groups can be retained if resins such as 2-Chlorotrityl or Sieber Amide, which can be cleaved with mild acid, are utilized. The Hmb backbone-protected peptides are generally more soluble than the non-protected counterparts and are easier to purify. After purification, treatment with a strong acid such as TFA removes the Hmb protecting groups and produces the native peptide.

#### (Hmb)Amino Acid References

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#### Apex 396 Reagent Bottles



800 mL Oblong Reagent Bottle

The Apex 396 features a large 800 mL reagent bottle for coupling reagents. This bottle will contain enough coupling reagent to synthesize even the longest peptide sequences without refilling. The bottle is specially designed to minimize dead volume and eliminate unnecessary waste.

Smaller 300 mL reagent bottles are available for special reagents or for smaller projects where the large capacity reagent bottle is not necessary.

All reagent and amino acid bottles are sealed with septa to prevent air and moisture from degrading the contents. Solutions are withdrawn from the septa-sealed bottles through coaxial probes. As the solution is withdrawn, the volume is replaced with nitrogen or xenon to maintain an inert atmosphere.

#### Planning to go to the 22nd APS Symposium?

June 25 – 30  
San Diego, California

Visit our booths (Booths 12 & 62) to see our newest addition!

#### UPCOMING EVENTS

##### 22nd American Peptide Symposium

June 25-30, 2011  
San Diego, CA  
Booth #12 and #62

##### ACS Fall Meeting 2011

August 28 - September 1, 2011  
Denver, CO  
Booth #608