

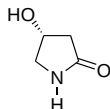
New Chiral Building Blocks

Aldrich continues to introduce new chiral building blocks for organic synthesis. A small sampling of our recent additions is shown below. For a complete listing of our new chiral building blocks, please request your free copy of the **1998-99 Sigma-Aldrich Chiral Catalog** from your local office. For the latest chiral products offered, visit our newly remodeled web site at www.sial.com/aldrich/chiral/index.htm.

The (R)-(+)-enantiomer is an intermediate used in the synthesis of antibacterial carbapenems.

Miyauchi, M. et al. *J. Antibiot.* **1997**, 50, 429.

47,916-0 (R)-(+)-4-Hydroxy-2-pyrrolidinone, 97%



1g; 5g

47,917-9 (S)-(-)-4-Hydroxy-2-pyrrolidinone, 97%

1g; 5g

These amino diols are used in the efficient synthesis of (R)- and (S)-5-hydroxymethyl-2-oxazolidinones and derivatives.

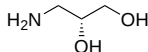
Danielmeier, K.; Steckhan, E. *Tetrahedron: Asymmetry* **1995**, 6, 1181.

47,395-2 (R)-(+)-3-Amino-1,2-propanediol, 98%

1g; 5g

47,396-0 (S)-(-)-3-Amino-1,2-propanediol, 98%

1g; 5g



Used for the preparation of AZT conjugates bearing alkoxypropanols in the lipid portion of the molecule.

Tsotinis, A. et al. *J. Med. Chem.* **1996**, 39, 3418.

47,397-9 (R)-(-)-1,2-propanediol, 97% (98% ee)

1g; 5g

23,777-9 (S)-(+)-1,2-propanediol, 99%

1g; 5g



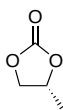
Carbonate derivative of both enantiomers of 1,2-propanediol.

47,399-5 (R)-(+)-Propylene carbonate, 98% (98% ee)

1g; 5g

47,398-7 (S)-(-)-Propylene carbonate, 98% (98% ee)

1g; 5g



Building block for novel nicotinic acetylcholine receptor ligands with cognition-enhancing properties.¹ Also used in the synthesis of chiral β -amino sulfides and β -amino thiols.²

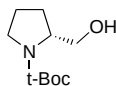
(1) Lin, N.-H. et al. *J. Med. Chem.* **1997**, 40, 385. Elliott, R.L. et al. *Bioorg. Med. Chem. Lett.* **1996**, 6, 2283. Abreo, M.A. et al. *J. Med. Chem.* **1996**, 39, 817. (2) Cran, G.A. et al. *Tetrahedron: Asymmetry* **1995**, 6, 1553.

46,944-0 (R)-(+)-1-(tert-Butoxycarbonyl)-2-pyrrolidinemethanol, 98%

1g

44,632-7 (S)-(-)-1-(tert-Butoxycarbonyl)-2-pyrrolidinemethanol, 98%

1g; 5g



New useful chiral synthon (derived from serine) for the asymmetric synthesis of a variety of nitrogen-containing targets.

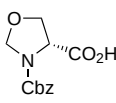
Falorni, M. et al. *Tetrahedron: Asymmetry* **1995**, 6, 287.

46,947-5 (R)-(+)-3-(Benzyloxycarbonyl)-4-oxazolidinecarboxylic acid, 98% (97% ee)

1g; 5g

46,946-7 (S)-(-)-3-(Benzyloxycarbonyl)-4-oxazolidinecarboxylic acid, 98% (97% ee)

1g; 5g



Intermediate for the synthesis of hydroxyethylene dipeptide isosteres that have enzyme inhibition properties.

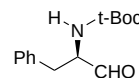
Mordini, A. et al. *Tetrahedron Lett.* **1996**, 37, 5209.

46,928-9 (R)-(+)-2-(tert-Butoxycarbonylamino)-3-phenylpropanal, 97%

250mg; 1g

46,929-7 (S)-(-)-2-(tert-Butoxycarbonylamino)-3-phenylpropanal, 97%

250mg; 1g



Used in the synthesis of (S)-(-)-pindolol and chuangxinmycin.

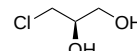
Ishibashi, H. et al. *Chem. Pharm. Bull.* **1994**, 42, 271.

44,098-1 (R)-(-)-3-Chloro-1,2-propanediol, 97% (97% ee)

1g; 5g

44,100-7 (S)-(+)-3-Chloro-1,2-propanediol, 98% (97% ee)

1g; 5g

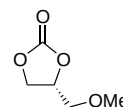


Building block for the preparation of moamine oxidase inhibitors.

47,401-0 (R)-(+)-4-(Methoxymethyl)-1,3-dioxolan-2-one, 98% (97% ee) 1g \$15.75; 5g \$52.10

47,400-2 (S)-(-)-4-(Methoxymethyl)-1,3-dioxolan-2-one, 98% (97% ee)

1g; 5g



Precursor in the short and practical syntheses of (R)-(-)-carnitine and (R)-(-)- γ -amino- β -hydroxybutyric acid (GABOB).

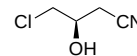
Kolb, H.C. et al. *Tetrahedron: Asymmetry* **1993**, 4, 133.

45,615-2 (R)-(+)-4-Chloro-3-hydroxybutyronitrile, 97% (97% ee)

1g; 5g

45,616-0 (S)-(-)-4-Chloro-3-hydroxybutyronitrile, 97% (97% ee)

1g; 5g



These building blocks have been used for the synthesis of both enantiomers of 4-hydroxytetrahydrofuran-2-one and 3-hydroxytetrahydrofuran.

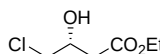
Yuasa, Y.; Tsuruta, H. *Liebigs Ann. Recl.* **1997**, 1877.

46,051-6 Ethyl (R)-(+)-4-chloro-3-hydroxybutyrate, 96% (97% ee)

1g; 5g

46,052-4 Ethyl (S)-(-)-4-chloro-3-hydroxybutyrate, 96% (97% ee)

1g; 5g



Building block used in the synthesis of ketoconazole¹ and deazapurine nucleosides.²

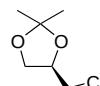
(1) Camps, P. et al. *Tetrahedron: Asymmetry* **1995**, 6, 1283. (2) Dvorakova, H. et al. *Collect. Czech. Chem. Commun.* **1993**, 58, 629.

45,613-6 (R)-(+)-4-(Chloromethyl)-2,2-dimethyl-1,3-dioxolane, 98%

1g; 5g

45,614-4 (S)-(-)-4-(Chloromethyl)-2,2-dimethyl-1,3-dioxolane, 98%

1g; 5g



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