Supporting Information

Synthesis and properties of MIDA boronate containing aromatic amino acids: New peptide building blocks*

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- **Part 1** ¹H and ¹³C NMR Spectra
- Part 2 Chiral HPLC Analysis for Compounds 9-11



Part 1













¹³C expansion: compound **3a**

¹³C expansion: compound **12**

¹³C expansion: compound **13**

¹³C expansion: compound **15**

Part 2 Chiral HPLC Analysis for Compounds 9-11

Data File C:\CHEM32\2\DATA\ONY_0510\170510000023.D Sample Name: NC REF 4 Acq. Operator : Katie Poole Acq. Instrument : AS_LC3 Seq. Line : 2 Location : Vial 12 Injection Date : 17/05/2010 17:28:35 Inj: 2 Inj Volume : 10 μ l Different Inj Volume from Sequence ! Actual Inj Volume : 10 µ Acq. Method : C:\CHEM32\2\METHODS\MIDA60.M Last changed : 17/05/2010 16:22:47 by Katie Poole Analysis Method : C:\CHEM32\2\METHODS\MIDA60.M Last changed : 18/05/2010 09:39:07 by Katie Poole (modified after loading) : Chiral purity by HPLC Method Info Chiralcel IA 250 x 4.6mm, 5um PS (Daicel; #80325) : NC131 + NC137 Sample Info Chiral HPLC Test mix for 9a and 9b Chrialpak IA 250 x 150 VWD1 A, Wavelength=220 nm (ONY_0510\170510000023.D) 18470.2 mAU 100 1600 .276 - (R)-E 1400 BocHN 1200 OBn 1000 254 - (S)-Enantiomer 800 600 400 200 0 12 14 min 6 8 10 4 2 Area Percent Report _____ Signal Sorted By Calib. Data Modified : 18/05/2010 09:39:08 Multiplier 1.0000 : Dilution 1.0000 Use Multiplier & Dilution Factor with ISTDs Signal 1: VWD1 A, Wavelength=220 nm Peak RetTime Type Width Area Area Name Totals : 2.34888e4 AS LC3 18/05/2010 09:39:44 Katie Poole Page 1 of 2

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Data File C:\CHEM32\2\DATA\ONY_0510\170510000025.D
 Sample Name: NC131
    Acq. Operator : Katie Poole
Acq. Instrument : AS_LC3
                                               Seq. Line :
                                                                       3
                                                        Location : Vial 13
    Lication : Vial :

Inj : 2

Inj Volume : 10 μl

Acq. Method : C:\CHEM32\2\METHODS\MIDA60.M

Last changed : 17/05/2010 16:22:47 by Katie Poole

Analysis Method : C:\CHEM32\2\METHODS\MIDA60.M

Last changed : 18/05/2010 cc.
    Last changed : 18/05/2010 09:39:07 by Katie Poole
(modified after loading)
                   : Chiral purity by HPLC
    Method Info
                      Chiralcel IA 250 x 4.6mm, 5um PS (Daicel; #80325)
    Sample Info
                   : (S)-Enantiomer
            VWD1 A, Wavelength=220 nm (ONY_0510\170510000025.D)
                                                   8603.72
      mAU
                                               6 267 - (S) En
        600
        500
                                                                 BocHN.
        400
        300
                                           (R)-Enantiomer
        200
        100
                                           384 -
                                               5
          0
                                                                      10
                                                                                  12
                                                                                             14 min
                       2
                                   4
                                               6
                                                          8
    Area Percent Report
    _____
                       Sorted By
                                   Signal
    Calib. Data Modified
                                   18/05/2010 09:39:08
                                   1.0000
    Multiplier
                           :
                                   1.0000
    Dilution
    Use Multiplier & Dilution Factor with ISTDs
    Signal 1: VWD1 A, Wavelength=220 nm
    Peak RetTime Type
                          Width
                                               Area
                                                         Name
                                    Area
    # [min] [min] mAU *s %

1 5.384 MM 0.1797 45.30048 0.5238 (R)-E
                         0.1797 45.30048 0.5238 (R)-Enantiomer
0.2116 8603.71582 99.4762 (S)-Enantiomer
       2
           6.267 MM
                                  8649.01630
    Totals :
    1 Warnings or Errors :
AS LC3 18/05/2010 09:40:27 Katie Poole
                                                                                  Page 1 of 2
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Data File C:\CHEM32\2\DATA\ONY_0510\170510000026.D
 Sample Name: NC137
    _____
    Acq. Operator : Katie Poole
Acq. Instrument : AS_LC3
                                                          Seq. Line :
                                                                           4
                                                           Location : Vial 14
   Different Inj Volume from Sequence ! Actual Inj Volume : 5 µl
Acq. Method : C:\CHEM32\2\METHODS\MIDA60.M
Last changed : 17/05/2010 16:22:47 by Katie Poole
Analysis Method : C:\CHEM32\2\METHODS\MIDA60.M
Last changed : 18/05/2010 09:39:07 by Katie Poole
    Last changed : 18/05/2010 09:39:07 by Katie Poole
(modified after loading)
    Method Info
                      : Chiral purity by HPLC
                        Chiralcel IA 250 x 4.6mm, 5um PS (Daicel; #80325)
    Sample Info
                     : (R)-Enantiomer
             VWD1 A, Wavelength=220 nm (ONY_0510\170510000026.D)
      mAU
                                                19862
                                            286 - (R)-Enantion
        1600
        1400
                                                              BocHN
        1200
        1000
         800
         600
                                                   3,272 - (S)-Enantiomer
         400
                                                      246,402
         200
          0
                                     4
                                                 6
                                                                                      12
                                                                                                  14 min
                         2
                                                             8
                                                                          10
     Area Percent Report
                                                            Sorted By
                                     Signal
                                     18/05/2010 09:39:08
    Calib. Data Modified
    Multiplier
                                     1.0000
                             :
                                     1.0000
    Dilution
    Use Multiplier & Dilution Factor with ISTDs
    Signal 1: VWD1 A, Wavelength=220 nm
    Peak RetTime Type
                            Width
                                                   Area
                                                            Name
                                       Area
    # [min] [min] mAU *s %

1 5.286 FM 0.1773 1.88628e4 98.710
                                                 98.7106 (R)-Enantiomer
1.2894 (S)-Enantiomer
        2
            6.272 FM
                            0.2088 246.40179
                                    1.91093e4
    Totals :
    1 Warnings or Errors :
                                                                                      Page 1 of 2
AS LC3 18/05/2010 09:41:07 Katie Poole
```



```
Data File C:\CHEM32\2\DATA\ONY_0510\170510000031.D
Sample Name: NC133
Acq. Operator : Katie Poole Seq. Line : 6
Acq. Instrument : AS_LC3 Location : Vial 16
Injection Date : 17/05/2010 19:37:24 Inj : 2
Inj Volume : 10 µl
Different Inj Volume from Sequence ! Actual Inj Volume : 5 µl
Acq. Method : C:\CHEM32\2\METHODS\MIDA60.M
Last changed : 17/05/2010 16:22:47 by Katie Poole
Analysis Method : C:\CHEM32\2\METHODS\MIDA60.M
Last changed : 18/05/2010 11:46:05 by Katie Poole
(modified after loading)
Method Info : Chiral purity by HPLC
Chiralcel IA 250 x 4.6mm, 5um PS (Daicel; #80325)
Sample Info : (S)-Enantiomer
```


Data File C:\CHEM32\2\DATA\ONY_0510\170510000037.D Sample Name: NC136 _____ Acq. Operator : Katie Poole Acq. Instrument : AS_LC3 9 Seq. Line : Location : Vial 19 Different Inj Volume from Sequence ! Actual Inj Volume : 10 μl Acq. Method : C:\CHEM32\2\METHODS\MIDA60.M Last changed : 17/05/2010 16:22:47 by Katie Poole Analysis Method : C:\CHEM32\2\METHODS\MIDA60.M Last changed : 18/05/2010 27.00 Last changed : 18/05/2010 11:48:29 by Katie Poole (modified after loading) : Chiral purity by HPLC Method Info Chiralcel IA 250 x 4.6mm, 5um PS (Daicel; #80325) : (S)-Enantiomer Sample Info VWD1 A, Wavelength=220 nm (ONY_0510\170510000037.D) 6.608 - (S)-Enantiomer mAU 1750 1500 BocHN, OBn 1250 OMe 1000 750 240 - (R)-Enantiomer 500 60.7035 250 0 12 14 min 8 10 2 4 6 _____ Area Percent Report _____ Signal Sorted By Calib. Data Modified 18/05/2010 11:48:29 1.0000 1.0000 Multiplier : Dilution Use Multiplier & Dilution Factor with ISTDs Signal 1: VWD1 A, Wavelength=220 nm Peak RetTime Type Width Area Area Name [min] # -- | ------ | ------ | --0.2150 (R)-Enantiomer 99.7850 (S)-Enantiomer 5.240 MM 6.608 MM 1 0.2455 2.81718e4 2 Totals : 2.82325e4 1 Warnings or Errors : Page 1 of 2 AS_LC3 18/05/2010 11:49:47 Katie Poole

