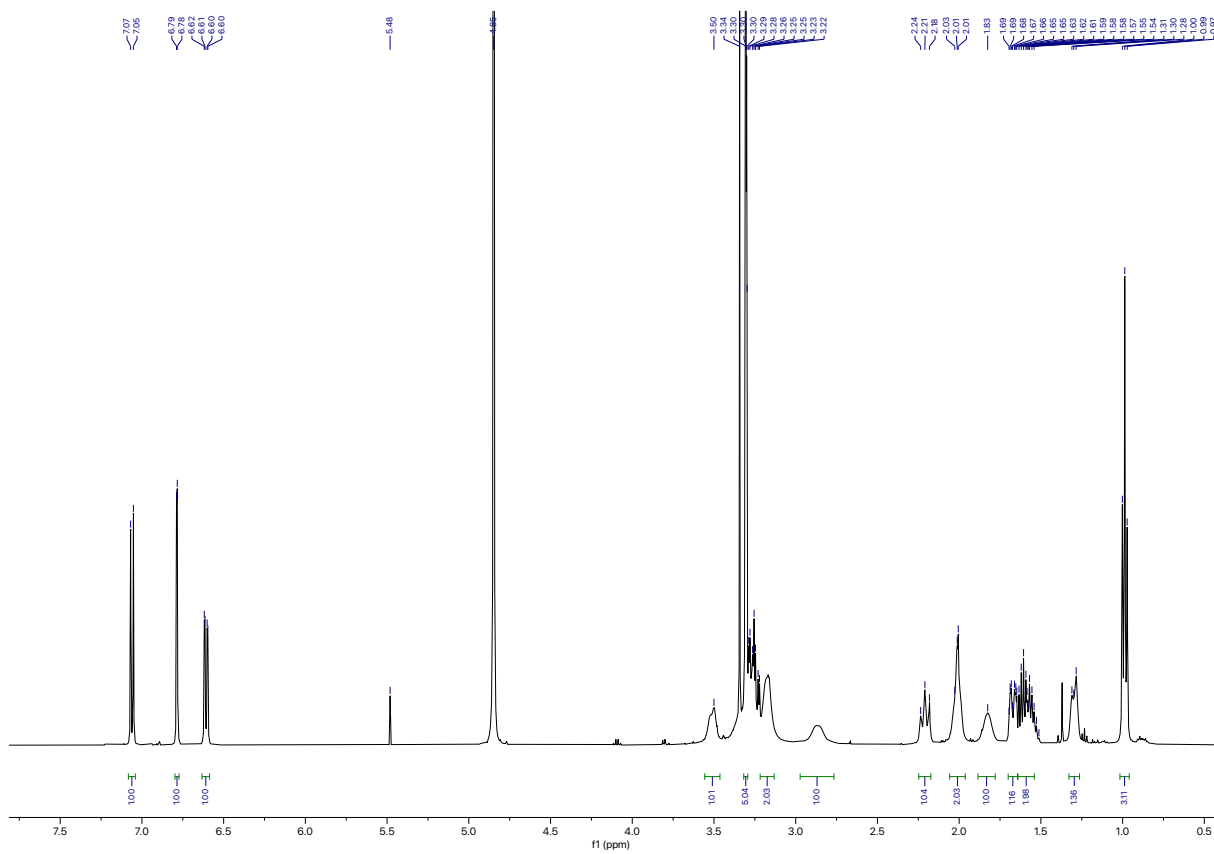
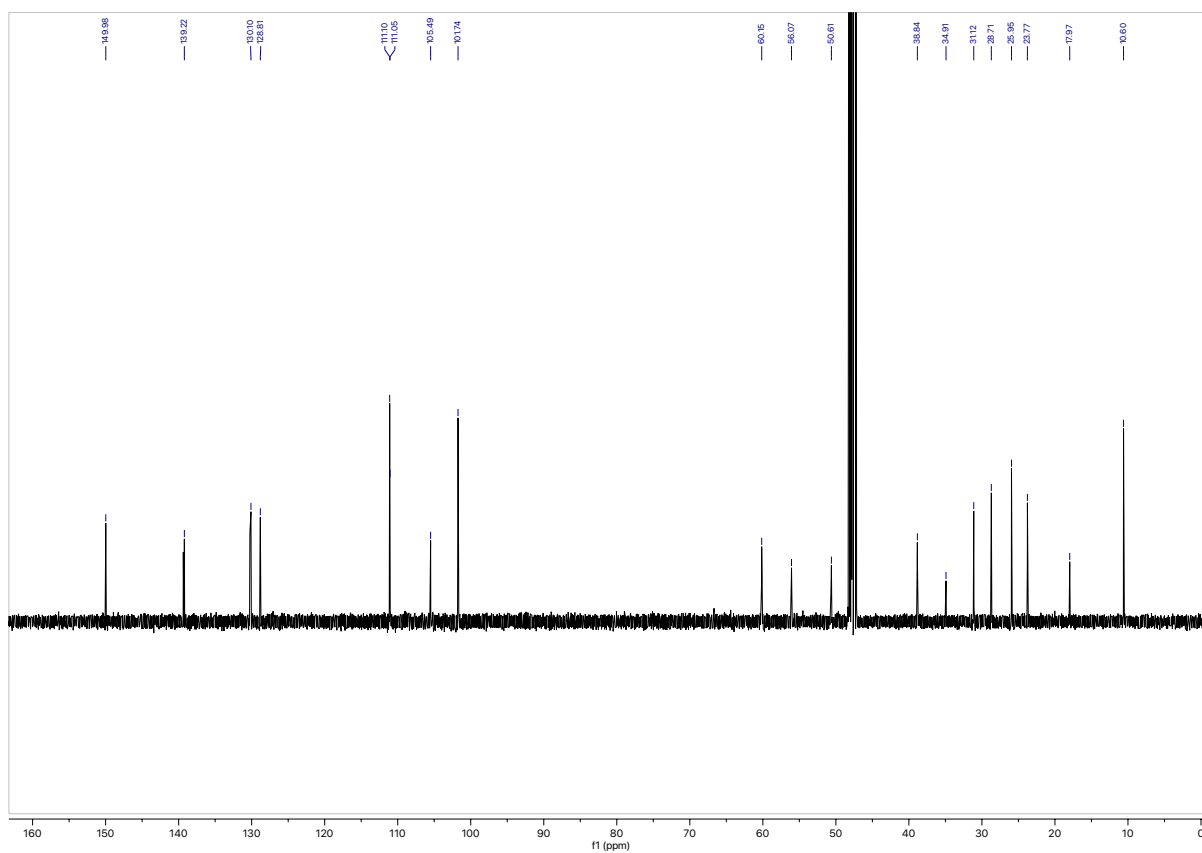


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Appendix Figure S1. 500 MHz ^1H NMR of noribogaine HCl in CD_3OD . ^1H NMR (500 MHz, CD_3OD) δ 7.07 (d, 1H, J = 8.5 Hz), 6.79 (d, 1H, J = 2.3 Hz), 6.61 (dd, 1H, J = 8.5 Hz, 2.3 Hz), 3.55-3.45 (m, 1H), 3.31-3.29 (m, 5H), 3.28-3.14 (m, 5H), 2.21 (t, 1H, J = 13.4 Hz), 2.04-1.98 (m, 2H), 1.83 (brs, 1H), 1.71-1.49 (m, 3H), 1.33-1.24 (m, 1H), 0.99 (t, J = 7.4 Hz, 3H); ^{13}C NMR (125 MHz, CD_3OD) δ 149.98, 139.22, 130.10, 128.81, 111.09, 111.05, 105.49, 101.74, 60.15, 56.07, 50.61, 38.84, 34.91, 31.11, 28.71, 25.95, 23.77, 17.97, 10.60; **HRMS** m/z (DART): $[\text{M}+\text{H}^+]$ calculated for $\text{C}_{19}\text{H}_{25}\text{ON}_2$ 297.4, found 297.2.



Appendix Figure S2. 125 MHz ^{13}C NMR of noribogaine HCl in CD_3OD .

Appendix Table S1. Primers used for A313V mDAT sequencing.

Name	Sequence
mDAT cDNA F110	GGC AGT CGA AGA AGA AGG AA
mDAT cDNA R2591	GAC CCT GCG TGT GTG TAA TA
mDAT cDNA F24	GAT AAG AGC TCA AGG CTG AGA C
mDAT cDNA R2919	CGG AAA TCA AAC CCA AGA AGT G
mDAT cDNA F92	CTG AAG TCT GAC GCT GGA G
mDAT cDNA R2160	GAA GCC CAT GCT TGG ATT ATT T
mDAT cDNA F55	CTG TGA AGC GCG ACT GG
mDAT cDNA R2097	CTT GAC GTG TTG GTT TCC TTT G
mDAT F1934	GCC ATC ACA CCT GAG AAA GA
mDAT R622	GAA GAA GCC CAC GTA GAA AGA G
mDAT R754	ATC GCT AGA GTT GCT GCT ATG
mDAT R1228	GAA GCT CGT CAG GGA GTT AAT G
mDAT R1542	CAG AAG AGA GAC AGC AGG AAA G

Primers used for amplification and sequencing of the A313V mDAT coding region. Numbering of the cDNA corresponds to reference sequence NM_010020.3 in which the coding region is between bp158 and bp2017. See below for alignments.

A313V 1A with R2160

```

      450      460      470      480      490      500
EMBOSS GGCCGCTGTCTTCTTCCTCATGCTGCTCACTCTGGGTATCGACAGTGCCATGGGGGGGCAT
      :
EMBOSS GGCCGCTGTCTTCTTCCTCATGCTGCTCACTCTGGGTATCGACAGTGCCATGGGGGGGCAT
      1380      1390      1400      1410      1420      1430

      510      520      530      540      550      560
EMBOSS GGAGTCTGTGATCACTGGGCTTGTCGATGAGTTCCAGCTGCTACATCGGCATCGAGAGCT
      :
EMBOSS GGAGTCTGTGATCACTGGGCTTGTCGATGAGTTCCAGCTGCTACATCGGCATCGAGAGCT
      1440      1450      1460      1470      1480      1490

      570      580      590      600      610      620
EMBOSS CTTCACTCTTGGCATTGTCCTGGCTACTTTCTGCTGTCTCTTCTGTGTACCAACGG
      :
EMBOSS CTTCACTCTTGGCATTGTCCTGGCTACTTTCTGCTGTCTCTTCTGTGTACCAACGG
      1500      1510      1520      1530      1540      1550

      630      640      650      660      670      680
EMBOSS TGGCATCTATGTCTTCACACTGCTGGACCACTTTGCAGCTGGCACATCTATCCTCTTTGG
      :
EMBOSS TGGCATCTATGTCTTCACACTGCTGGACCACTTTGCAGCTGGCACATCTATCCTCTTTGG
      1560      1570      1580      1590      1600      1610

      690      700      710      720      730      740
EMBOSS AGTGCTCATTGAAGCCATTGGGGTGGCCTGGTTCTACGGTGTCCAGCAATTCAGTGATGA
      :
EMBOSS AGTGCTCATTGAAGCCATTGGGGTGGCCTGGTTCTACGGTGTCCAGCAATTCAGTGATGA
      1620      1630      1640      1650      1660      1670

      750      760      770      780      790      800
EMBOSS CATCAAGCAGATGACTGGGCAGCGACCCAACCTGTACTGGCGGCTATGCTGGAAGCTGGT
      :
EMBOSS CATCAAGCAGATGACTGGGCAGCGACCCAACCTGTACTGGCGGCTATGCTGGAAGCTGGT
      1680      1690      1700      1710      1720      1730

      810      820      830      840      850      860
EMBOSS CAGCCCCTGCTTCCTTCTGTATGTGGTCGTGGTCAGCATTGTGACCTTCAGACCCCCACA
      :
EMBOSS CAGCCCCTGCTTCCTTCTGTATGTGGTCGTGGTCAGCATTGTGACCTTCAGACCCCCACA
      1740      1750      1760      1770      1780      1790
```

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      870      880      890      900      910      920
EMBOSS CTATGGAGCCTACATCTTCCCAGACTGGGCCAATGCCCTGGGCTGGATCATTGCCACATC
      .....
EMBOSS CTATGGAGCCTACATCTTCCCAGACTGGGCCAATGCCCTGGGCTGGATCATTGCCACATC
      1800      1810      1820      1830      1840      1850

      930      940      950      960      970      980
EMBOSS CTCCATGGCCATGGTGCCCATTTATGCCACCTATAAGTTCTGCAGCCTGCCAGGGTCCTT
      .....
EMBOSS CTCCATGGCCATGGTGCCCATTTATGCCACCTATAAGTTCTGCAGCCTGCCAGGGTCCTT
      1860      1870      1880      1890      1900      1910

      990      1000      1010      1020      1030      1040
EMBOSS CCGAGAGAAACTGGCCTATGCCATCACACCTGAGAAAGACCGCCAGCTAGTGACAGAGG
      .....
EMBOSS CCGAGAGAAACTGGCCTATGCCATCACACCTGAGAAAGACCGCCAGCTAGTGACAGAGG
      1920      1930      1940      1950      1960      1970

      1050      1060      1070      1080      1090      1100
EMBOSS GGAGGTGCGCCAATTCACGCTGCGCCATTGGCTGTTGGTGTAAGTGAAGGAGACAGCT
      .....
EMBOSS GGAGGTGCGCCAATTCACGCTGCGCCATTGGCTGTTGGTGTAAGTGAAGGAGACAGCT
      1980      1990      2000      2010      2020      2030

      1110      1120      1130      1140      1150      1160
EMBOSS GCCAGCTGGGCCATCTCACAACAGCGGGGACAGGGAGATCACAAAGGAAACCAACACGTC
      .....
EMBOSS GCCAGCTGGGCCATCTCACAACAGCGGGGACAGGGAGATCACAAAGGAAACCAACACGTC
      2040      2050      2060      2070      2080      2090

      1170      1180      1190
EMBOSS AAGAAAGGAGGGCCACT-CCACAGTCCC-----
      .....
EMBOSS AAGAAAGGAGGGCCACTTCCACAGTCCCCTTTGCCATATGGAAAAATAATCCAAGCATG
      2100      2110      2120      2130      2140      2150

```

A313V 10D with F92 versus reference sequence

```
EMBOSS -----GACTTC
          :::::
EMBOSS CAGGACCTCAAAGCTGAAGTCTGACGCTGGAGGCAGTCGAAGAAGAAGGAAACAGACTTC
      80      90      100      110      120      130

      20      30      40      50      60      70
EMBOSS -TCGGGCTCCCGTCTACCCATGAGTAAAARCAAATGCTCCGTGGGACCARTGTCTTCTGT
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS CTCGGGCTCCCGTCTACCCATGAGTAAAAGCAAATGCTCCGTGGGACCAATGTCTTCTGT
      140      150      160      170      180      190

      80      90      100      110      120      130
EMBOSS GGTGGCCCCGGCTAAAGAGCCCAATGCTGTGGGCCCCAGAGAGGTGRARCTCATCTTGGT
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS GGTGGCCCCGGCTAAAGAGCCCAATGCTGTGGGCCCCAGAGAGGTGGAGCTCATCTTGGT
      200      210      220      230      240      250

      140      150      160      170      180      190
EMBOSS CAAGGAGCARAATGGAGTGCAGCTGACCAACTCCACCCTCATCAACCCACCGCAGACACC
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS CAAGGAGCAGAATGGAGTGCAGCTGACCAACTCCACCCTCATCAACCCACCGCAGACACC
      260      270      280      290      300      310

      200      210      220      230      240      250
EMBOSS AGTGGAGGTTCAAGAGCGGGAGACCTGGAGCAAGAAAATCGATTCCTGCTCTCAGTCAT
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS AGTGGAGGTTCAAGAGCGGGAGACCTGGAGCAAGAAAATCGATTCCTGCTCTCAGTCAT
      320      330      340      350      360      370

      260      270      280      290      300      310
EMBOSS CGGCTTCGCTGTGGACCTGGCCAATGTCTGGAGGTTTCCCTACCTGTGCTACAAAAATGG
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS CGGCTTCGCTGTGGACCTGGCCAATGTCTGGAGGTTTCCCTACCTGTGCTACAAAAATGG
      380      390      400      410      420      430

      320      330      340      350      360      370
EMBOSS TGGAGGTGCCTTCCTGGTGCCCTACCTGCTCTTCATGGTTATTGCCGGGATGCCCTCTT
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS TGGAGGTGCCTTCCTGGTGCCCTACCTGCTCTTCATGGTTATTGCCGGGATGCCCTCTT
      440      450      460      470      480      490

      380      390      400      410      420      430
EMBOSS CTACATGGAGCTGGCTCTCGGGCAGTTCAACAGARAAGGAGCTGCTGGTGTCTGGAAGAT
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A313V 11D with R754

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                230      240      250      260      270
EMBOSS TG--AGATCTGTGAAGCGCGACTGGAGGCTTACAGGACCTCAAAGCTGAAGTCTGACGCT
      :: .....
EMBOSS TGCCAGAGCTGTGAAGCGCGACTGGAGGCTTACAGGACCTCAAAGCTGAAGTCTGACGCT
      50      60      70      80      90     100

      280      290      300      310      320      330
EMBOSS GGAGGCAGTCGAAGAAGAAGGAAACAGACTTCCTCGGGCTCCCGTCTACCCATGAGTAAA
      .....
EMBOSS GGAGGCAGTCGAAGAAGAAGGAAACAGACTTCCTCGGGCTCCCGTCTACCCATGAGTAAA
      110     120     130     140     150     160

      340      350      360      370      380      390
EMBOSS AGCAAATGCTCCGTGGGACCAATGTCTTCTGTGGTGGCCCCGGCTAAAGAGCCCAATGCT
      .....
EMBOSS AGCAAATGCTCCGTGGGACCAATGTCTTCTGTGGTGGCCCCGGCTAAAGAGCCCAATGCT
      170     180     190     200     210     220

      400      410      420      430      440      450
EMBOSS GTGGGCCCCAGAGAGGTGGAGCTCATCTTGGTCAAGGAGCAGAATGGAGTGCAGCTGACC
      .....
EMBOSS GTGGGCCCCAGAGAGGTGGAGCTCATCTTGGTCAAGGAGCAGAATGGAGTGCAGCTGACC
      230     240     250     260     270     280

      460      470      480      490      500      510
EMBOSS AACTCCACCCTCATCAACCCACCGCAGACACCAAGTGGAGGTTCAAGAGCGGGAGACCTGG
      .....
EMBOSS AACTCCACCCTCATCAACCCACCGCAGACACCAAGTGGAGGTTCAAGAGCGGGAGACCTGG
      290     300     310     320     330     340

      520      530      540      550      560      570
EMBOSS AGCAAGAAAATCGATTTCTGCTCTCAGTCATCGGCTTCGCTGTGGACCTGGCCAATGTC
      .....
EMBOSS AGCAAGAAAATCGATTTCTGCTCTCAGTCATCGGCTTCGCTGTGGACCTGGCCAATGTC
      350     360     370     380     390     400

      580      590      600      610      620      630
EMBOSS TGGAGGTTTCCCTACCTGTGCTACAAAAATGGTGGAGGTGCCTTCCTGGTGCCCTACCTG
      .....
EMBOSS TGGAGGTTTCCCTACCTGTGCTACAAAAATGGTGGAGGTGCCTTCCTGGTGCCCTACCTG
      410     420     430     440     450     460

      640      650      660      670      680      690

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EMBOSS CTCTTCATGGTTATTGCCGGGATGCCCCTCTTCTACATGGAGCTGGCTCTCGGGCAGTTC
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS CTCTTCATGGTTATTGCCGGGATGCCCCTCTTCTACATGGAGCTGGCTCTCGGGCAGTTC
      470      480      490      500      510      520

      700      710      720      730      740      750
EMBOSS AACAGAGAAGGAGCTGCTGGTGTCTGGAAGATCTGCCCTGTCCTGAAAGGTGTGGGCTTC
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS AACAGAGAAGGAGCTGCTGGTGTCTGGAAGATCTGCCCTGTCCTGAAAGGTGTGGGCTTC
      530      540      550      560      570      580

      760      770      780      790      800      810
EMBOSS ACTGTCATCCTCATCTCTTTCTACGTGGGCTTCTTCTACAATGTCATCATTGCATGGGCA
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS ACTGTCATCCTCATCTCTTTCTACGTGGGCTTCTTCTACAATGTCATCATTGCATGGGCA
      590      600      610      620      630      640

      820      830      840      850      860      870
EMBOSS CTGCACTACTTCTTCTCCTCCTTCACCATGGACCTCCCATGGATCCACTGCAACAACACC
      ::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::::
EMBOSS CTGCACTACTTCTTCTCCTCCTTCACCATGGACCTCCCATGGATCCACTGCAACAACACC
      650      660      670      680      690      700

      880      890
EMBOSS TG-AACAGCCCCA-----
      :: ::::::::::
EMBOSS TGGAACAGCCCCAACTGCTCTGATGCACATAGCAGCAACTCTAGCGATGGCCTGGGCCTC

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A313V 11D with R1228 RC

```

      120      130      140      150      160      170
EMBOSS AAATCGATTTCTGCTCTCAGTCATCGGCTTCGCTGTGGACCTGGCCAATGTCTGGAGGT
      .....
EMBOSS AAATCGATTTCTGCTCTCAGTCATCGGCTTCGCTGTGGACCTGGCCAATGTCTGGAGGT
      360      370      380      390      400      410

      180      190      200      210      220      230
EMBOSS TTCCCTACCTGTGCTACAAAAATGGTGGAGGTGCCTTCCTGGTGGCCTACCTGCTCTTCA
      .....
EMBOSS TTCCCTACCTGTGCTACAAAAATGGTGGAGGTGCCTTCCTGGTGGCCTACCTGCTCTTCA
      420      430      440      450      460      470

      240      250      260      270      280      290
EMBOSS TGGTTATTGCCGGGATGCCCTCTTCTACATGGAGCTGGCTCTCGGGCAGTTCAACAGAG
      .....
EMBOSS TGGTTATTGCCGGGATGCCCTCTTCTACATGGAGCTGGCTCTCGGGCAGTTCAACAGAG
      480      490      500      510      520      530

      300      310      320      330      340      350
EMBOSS AAGGAGCTGCTGGTGTCTGGAAGATCTGCCCTGTCCTGAAAGGTGTGGGCTTCACTGTCA
      .....
EMBOSS AAGGAGCTGCTGGTGTCTGGAAGATCTGCCCTGTCCTGAAAGGTGTGGGCTTCACTGTCA
      540      550      560      570      580      590

      360      370      380      390      400      410
EMBOSS TCCTCATCTCTTTCTACGTGGGCTTCTTCTACAATGTCATCATTGCATGGGCACTGCACT
      .....
EMBOSS TCCTCATCTCTTTCTACGTGGGCTTCTTCTACAATGTCATCATTGCATGGGCACTGCACT
      600      610      620      630      640      650

      420      430      440      450      460      470
EMBOSS ACTTCTTCTCCTCCTTCACCATGGACCTCCCATGGATCCACTGCAACAACACCTGGAACA
      .....
EMBOSS ACTTCTTCTCCTCCTTCACCATGGACCTCCCATGGATCCACTGCAACAACACCTGGAACA
      660      670      680      690      700      710

      480      490      500      510      520      530
EMBOSS GCCCCTGCTCTGATGCACATAGCAGCAACTCTAGCGATGGCCTGGGCCTCAACGACA
      .....
EMBOSS GCCCCTGCTCTGATGCACATAGCAGCAACTCTAGCGATGGCCTGGGCCTCAACGACA
      720      730      740      750      760      770

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      540      550      560      570      580      590
EMBOSS CCTTTGGGACCACACCCGCTGCTGAGTATTTTGAGCGTGGTGTGCTGCACCTCCATCAGA
      :
EMBOSS CCTTTGGGACCACACCCGCTGCTGAGTATTTTGAGCGTGGTGTGCTGCACCTCCATCAGA
      780      790      800      810      820      830

      600      610      620      630      640      650
EMBOSS GTCGTGGCATTGATGACCTGGGCCCTCCACGGTGGCAGCTCACAGCCTGCCTGGTGCTGG
      :
EMBOSS GTCGTGGCATTGATGACCTGGGCCCTCCACGGTGGCAGCTCACAGCCTGCCTGGTGCTGG
      840      850      860      870      880      890

      660      670      680      690      700      710
EMBOSS TCATTGTTCTGCTCTACTTCAGCCTGTGGAAGGGAGTAAAGACTTCAGGGAAGGTGGTGT
      :
EMBOSS TCATTGTTCTGCTCTACTTCAGCCTGTGGAAGGGAGTAAAGACTTCAGGGAAGGTGGTGT
      900      910      920      930      940      950

      720      730      740      750      760      770
EMBOSS GGATCACAGCTACCATGCCCTATGTAGTCCTCACAGCCCTGCTCCTGCGTGGAGTCACCC
      :
EMBOSS GGATCACAGCTACCATGCCCTATGTAGTCCTCACAGCCCTGCTCCTGCGTGGAGTCACCC
      960      970      980      990      1000      1010

      780      790      800      810      820      830
EMBOSS TCCCTGGGGCCATGGATGGCATCAGAGCATACCTCAGTGTGGACTTCTACCGTCTCTGTG
      :
EMBOSS TCCCTGGGGCCATGGATGGCATCAGAGCATACCTCAGTGTGGACTTCTACCGTCTCTGTG
      1020      1030      1040      1050      1060      1070

      840      850      860      870      880      890
EMBOSS AGGCATCTGTGTGGATCGACGTCGCCACCCAGGTGTGCTTCTCCCTTGGCGTTGGGTTTG
      :
EMBOSS AGGCATCTGTGTGGATCGATGCCGCCACCCAGGTGTGCTTCTCCCTTGGCGTTGGGTTTG
      1080      1090      1100      1110      1120      1130

      900      910      920      930      940      950
EMBOSS GGGTGCTGATTGCCTTCTCCAGTTACAATAAGT-CACCAATAACTGCTATAGAGAK----
      :
EMBOSS GGGTGCTGATTGCCTTCTCCAGTTACAATAAGTTCACCAATAACTGCTATAGAGATGCAA
      1140      1150      1160      1170      1180      1190

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A313V 11D with R1542RC

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      380      390      400      410      420      430
EMBOSS GCCCCTGCTCTGATGCACATAGCAGCAACTCTAGCGATGGCCTGGGCCTCAACGACA
      :
EMBOSS GCCCCTGCTCTGATGCACATAGCAGCAACTCTAGCGATGGCCTGGGCCTCAACGACA
      720      730      740      750      760      770

      440      450      460      470      480      490
EMBOSS CCTTTGGGACCACACCCGCTGCTGAGTATTTTGAGCGTGGTGTGCTGCACCTCCATCAGA
      :
EMBOSS CCTTTGGGACCACACCCGCTGCTGAGTATTTTGAGCGTGGTGTGCTGCACCTCCATCAGA
      780      790      800      810      820      830

      500      510      520      530      540      550
EMBOSS GTCGTGGCATTGATGACCTGGGCCCTCCACGGTGGCAGCTCACAGCCTGCCTGGTGTGCTGG
      :
EMBOSS GTCGTGGCATTGATGACCTGGGCCCTCCACGGTGGCAGCTCACAGCCTGCCTGGTGTGCTGG
      840      850      860      870      880      890

      560      570      580      590      600      610
EMBOSS TCATTGTTCTGCTCTACTTCAGCCTGTGGAAGGGAGTAAAGACTTCAGGGAAGGTGGTGT
      :
EMBOSS TCATTGTTCTGCTCTACTTCAGCCTGTGGAAGGGAGTAAAGACTTCAGGGAAGGTGGTGT
      900      910      920      930      940      950

      620      630      640      650      660      670
EMBOSS GGATCACAGCTACCATGCCCTATGTAGTCCTCACAGCCCTGCTCCTGCGTGGAGTCACCC
      :
EMBOSS GGATCACAGCTACCATGCCCTATGTAGTCCTCACAGCCCTGCTCCTGCGTGGAGTCACCC
      960      970      980      990      1000      1010

      680      690      700      710      720      730
EMBOSS TCCCTGGGGCCATGGATGGCATCAGAGCATACCTCAGTGTGGACTTCTACCGTCTCTGTG
      :
EMBOSS TCCCTGGGGCCATGGATGGCATCAGAGCATACCTCAGTGTGGACTTCTACCGTCTCTGTG
      1020      1030      1040      1050      1060      1070

      740      750      760      770      780      790
EMBOSS AGGCATCTGTGTGGATCGACGTCGCCACCCAGGTGTGCTTCTCCCTTGGCGTTGGGTTTG
      :
EMBOSS AGGCATCTGTGTGGATCGATGCCGCCACCCAGGTGTGCTTCTCCCTTGGCGTTGGGTTTG
      1080      1090      1100      1110      1120      1130

      800      810      820      830      840      850
EMBOSS GGGTGTGATTGCCTTCTCCAGTTACAATAAGTTACCAATAACTGCTATAGAGATGCAA

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:.....:
EMBOSS GGGTGCTGATTGCCTTCTCCAGTTACAATAAGTTCACCAATAACTGCTATAGAGATGCAA
      1140      1150      1160      1170      1180      1190

      860      870      880      890      900      910
EMBOSS TCATCACCACCTCCATTAACCTCCCTGACGAGCTTCTCCTCTGGCTTCGTTGTCTTCTCCT
:.....:
EMBOSS TCATCACCACCTCCATTAACCTCCCTGACGAGCTTCTCCTCTGGCTTCGTTGTCTTCTCCT
      1200      1210      1220      1230      1240      1250

      920      930      940      950      960      970
EMBOSS TCCTGGGGTACATGGCACAGAAGCACAATGTGCCCATCAGGGATGTGGCCACAGATGGAC
:.....:
EMBOSS TCCTGGGGTACATGGCACAGAAGCACAATGTGCCCATCAGGGATGTGGCCACAGATGGAC
      1260      1270      1280      1290      1300      1310

      980      990      1000      1010      1020      1030
EMBOSS CTGGGTTGATCTTCATCATCTACCCTGAGGCAATCGCCACACTCCCGCTGTCTTCAGCCT
:.....:
EMBOSS CTGGGTTGATCTTCATCATCTACCCTGAGGCAATCGCCACACTCCCGCTGTCTTCAGCCT
      1320      1330      1340      1350      1360      1370

      1040      1050      1060      1070      1080      1090
EMBOSS GGGCCGCTGTCTTCTTCCTCATGCTGCTCACTCTGGGTATCGACAGTGCCATGGGGGGCA
:.....:
EMBOSS GGGCCGCTGTCTTCTTCCTCATGCTGCTCACTCTGGGTATCGACAGTGCCATGGGGGGCA
      1380      1390      1400      1410      1420      1430

      1100      1110      1120      1130      1140      1150
EMBOSS TGGAGTCTGTGATCACTGGGCTTGTCGATGAGTTCCAGCTGCTACATCGGCATCGAGAGC
:.....:
EMBOSS TGGAGTCTGTGATCACTGGGCTTGTCGATGAGTTCCAGCTGCTACATCGGCATCGAGAGC
      1440      1450      1460      1470      1480      1490

```

Appendix Table S2-Western Blotting Protocol Summary

Western	Buffer	Blocking	Primary Antibody
Fig. 1 <i>a</i>	20 mM HEPES/1mM EDTA + PIs	LI-COR blocking buffer	Goat anti-DAT 1:500, Santa Cruz #sc-1433 (discontinued)
Fig. 1 <i>c</i>	20 mM HEPES/1mM EDTA + PIs	LI-COR blocking buffer	Goat anti-DAT 1:500, Santa Cruz #sc-1433 (discontinued)
Fig. 1 <i>g</i>	50mM Tris-Cl, 150mM NaCl, 1% NP-40, 0.1% SDS, 0.5% deoxycholate (RIPA) + PIs	5% BSA in TBS	Mouse anti-DAT, 1:250, Thermo Fisher #MA5-24796
Fig. 2 <i>a</i>	50mM Tris-Cl, 150mM NaCl, 1% NP-40, 0.1% SDS, 0.5% deoxycholate (RIPA) + PIs	5% BSA in TBS	Rabbit anti-TH 1:3000, Millipore Sigma #AB152; Rabbit anti- phosphoTH-ser40 1:2000, PhosphoSolutions #p1580-40, mouse anti- GAPDH 1:5000,

			Millipore Sigma #G8795
Fig. 11 <i>a,e</i>	30mM phosphate buffer /0.32M sucrose., pH7.9 + PIs	5% BSA in TBS	Rabbit anti-DAT, 1:500, Sigma-Aldrich #D6944
Fig. 11 <i>c,g</i>	50mM Tris-Cl, 150mM NaCl, 1% NP-40, 0.1% SDS, 0.5% deoxycholate (RIPA) + PIs	5% BSA in TBS	Rabbit anti-DAT, 1:500, Sigma-Aldrich #D6944
Fig. 12 <i>a,e</i>	30mM phosphate buffer/0.32M sucrose., pH7.9 + PIs	5% BSA in TBS	mouse anti-DAT, 1:250, Thermo Fisher #MA5-24796 and Rabbit anti-DAT, 1:500, Sigma-Aldrich #D6944
Fig. 12 <i>c,g</i>	50mM Tris-Cl, 150mM NaCl, 1% NP-40, 0.1% SDS, 0.5% deoxycholate (RIPA) + PIs	5% BSA in TBS	Rabbit anti-DAT, 1:500, Sigma-Aldrich #D6944

BSA, bovine serum albumin; DAT, dopamine transporter; NP-40, nonidet p-40; PIs, protease inhibitors; SDS, sodium dodecyl sulfate; TBS, tris-buffered saline

Appendix Table S3- LCMS gradient elution

Time (min)	Flow (ml/min)	(A)	(B)
0	0.40	90	10
1.0	0.40	90	10
10.0	0.40	40	60
11.0	0.40	90	10
15	0.40	90	10