



## **Supplementary Materials**

## Synthesis, Characterization and Biological Activity of a Novel Series of Benzo[4,5]imidazo[2,1-b]thiazole Derivatives as Potential Epidermal Growth Factor Receptor Inhibitors

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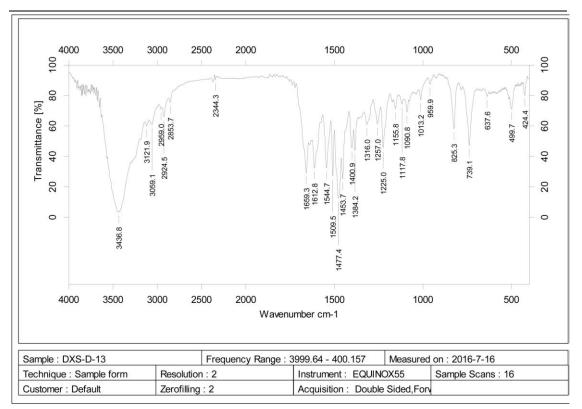


Figure S01. IR spectra of the target compound D01

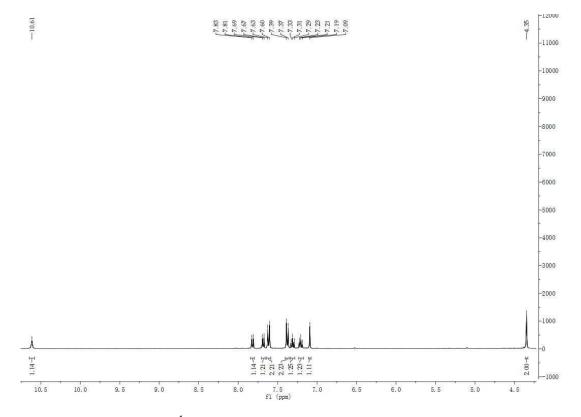


Figure S02. <sup>1</sup> H-NMR spectra of the target compound D01





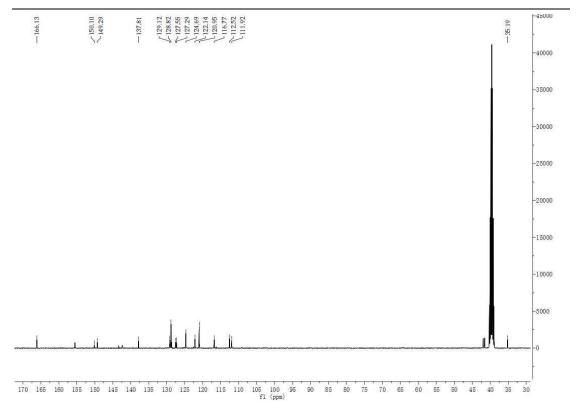


Figure S03. <sup>13</sup>C-NMR spectra of the target compound D01

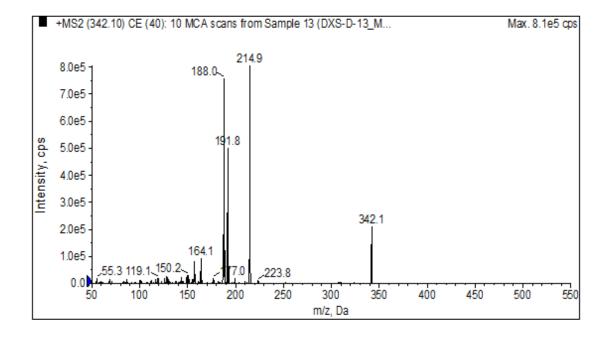


Figure S04. ESI-MS of the target compound D01





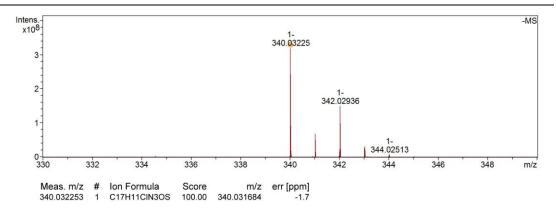


Figure S05. HRMS of the target compound D01

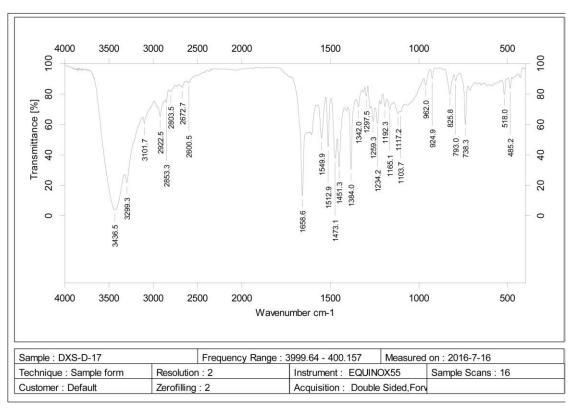


Figure S06. IR spectra of the target compound D02





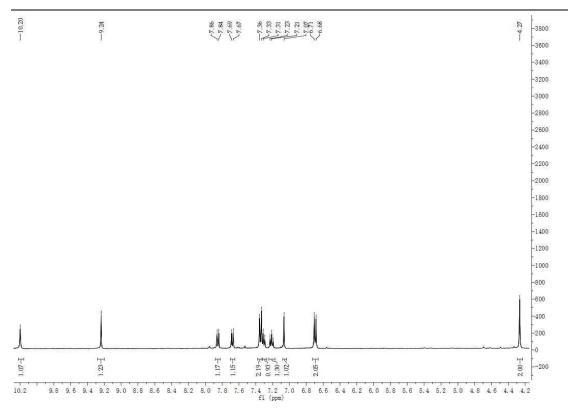


Figure S07. <sup>1</sup> H-NMR spectra of the target compound D02

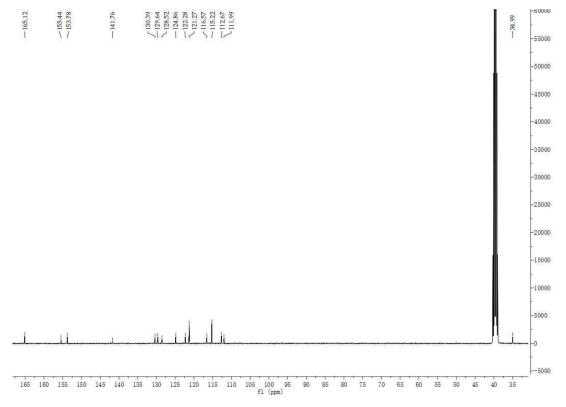


Figure S08. <sup>13</sup> C-NMR spectra of the target compound D02





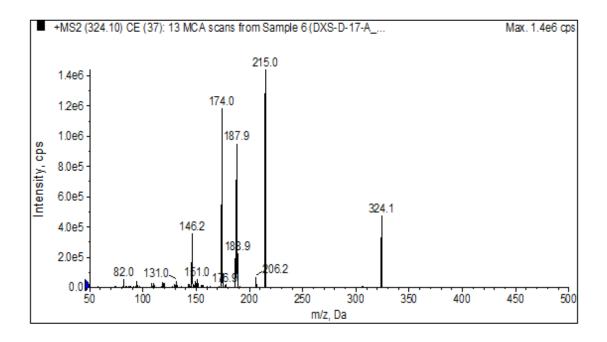


Figure S09. ESI-MS of the target compound D02

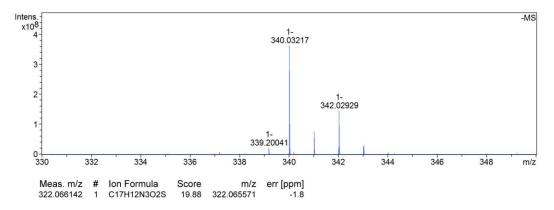


Figure S10. HRMS of the target compound D02





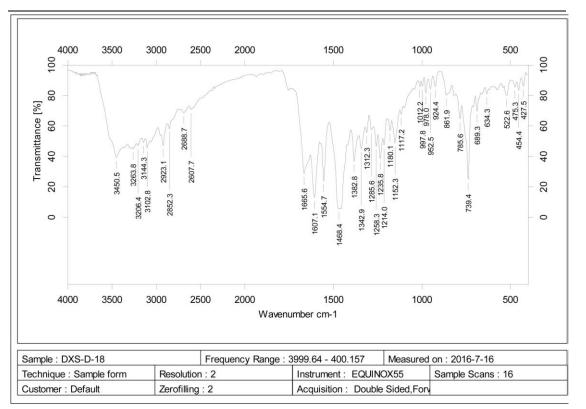


Figure S11. IR spectra of the target compound D03

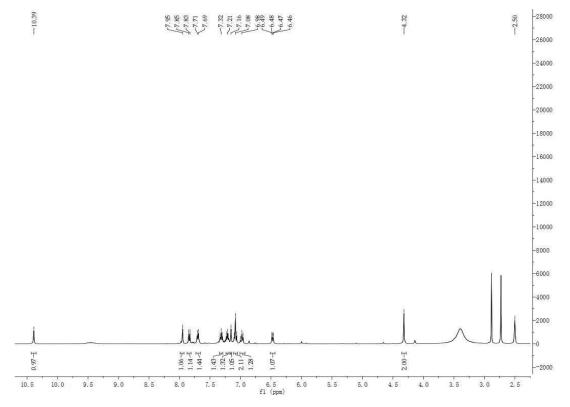


Figure S12. <sup>1</sup>H-NMR spectra of the target compound D03





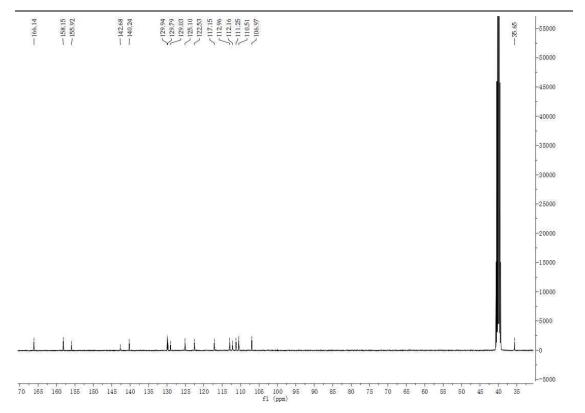


Figure S13. <sup>13</sup>C-NMR spectra of the target compound D03

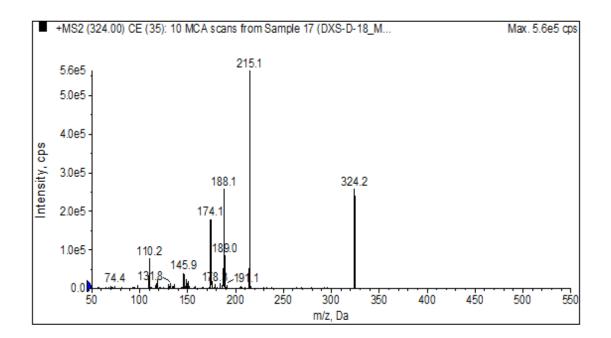


Figure S14. ESI-MS of the target compound D03





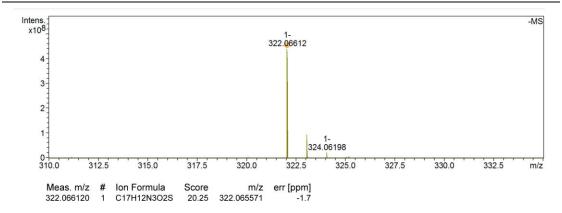


Figure S15. HRMS of the target compound D03

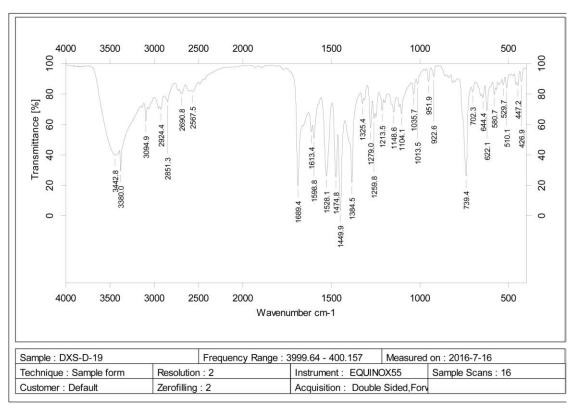


Figure S16. IR spectra of the target compound D04





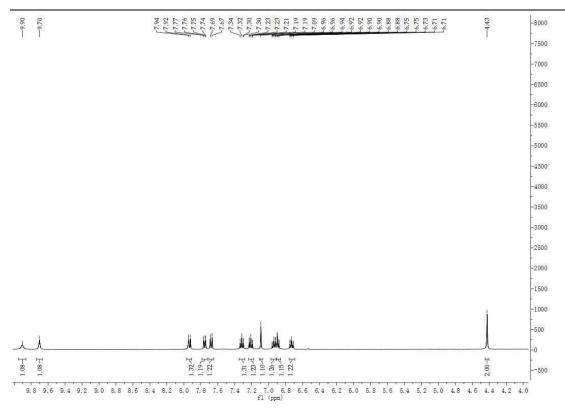


Figure S17. <sup>1</sup> H-NMR spectra of the target compound D04

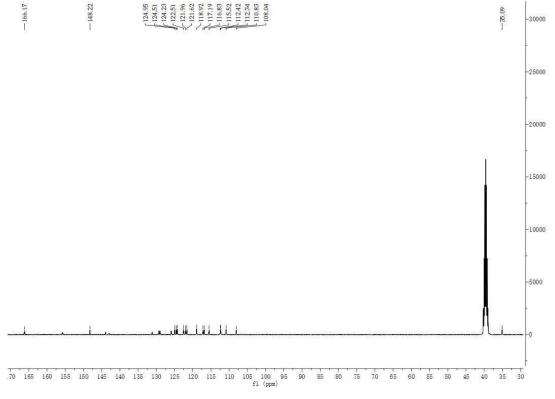


Figure S18. <sup>13</sup> C-NMR spectra of the target compound D04





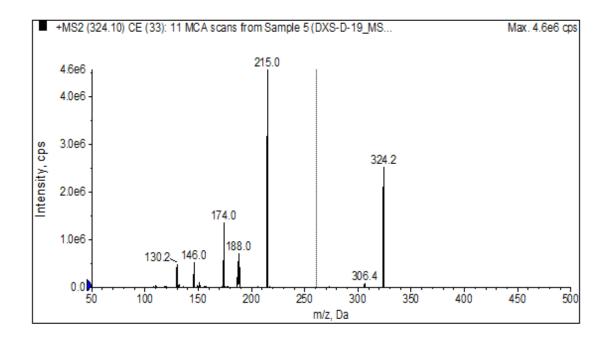


Figure S19. ESI-MS of the target compound D04

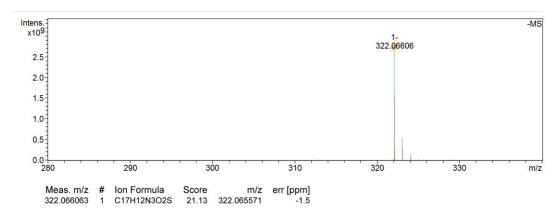


Figure S20. HRMS of the target compound D04





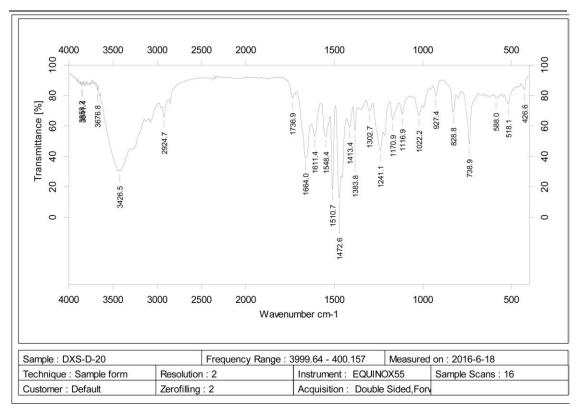


Figure S21. IR spectra of the target compound D05

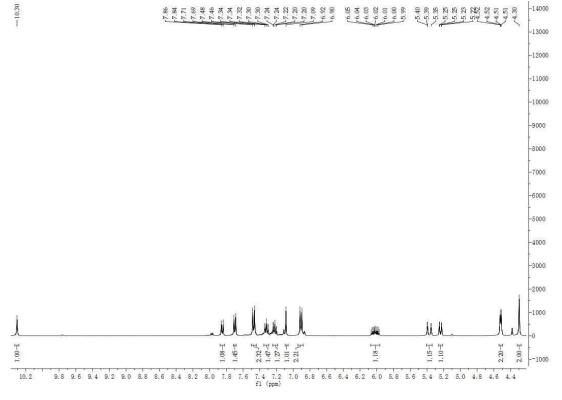


Figure S22. <sup>1</sup>H-NMR spectra of the target compound D05





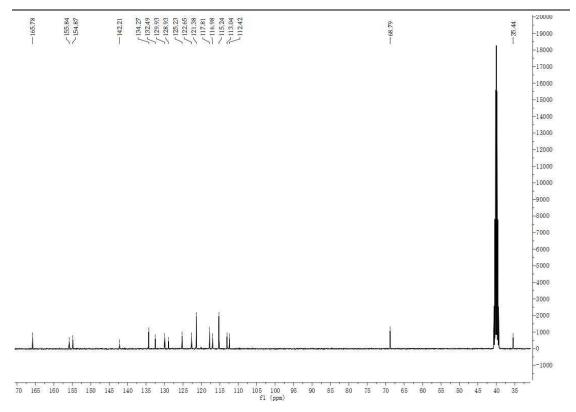


Figure S23. <sup>13</sup> C-NMR spectra of the target compound D05

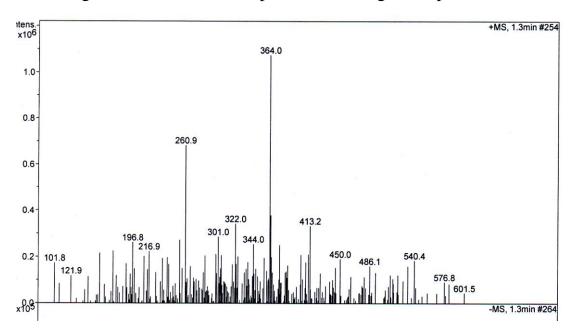


Figure S24. ESI-MS of the target compound D05





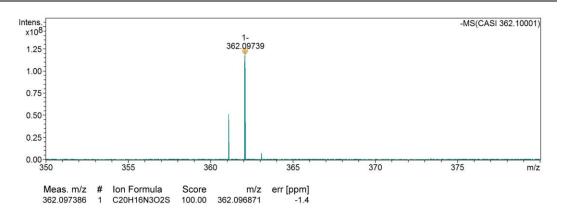


Figure S25. HRMS of the target compound D05

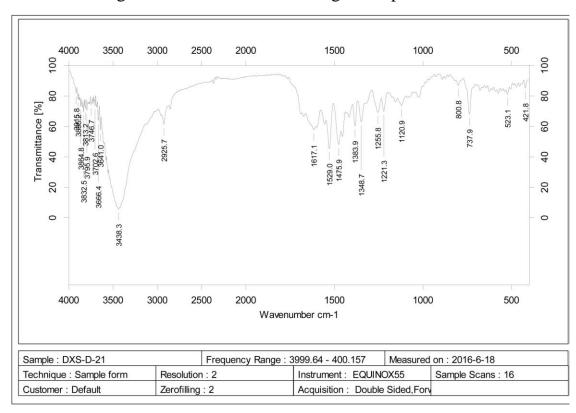


Figure S26. IR spectra of the target compound D06





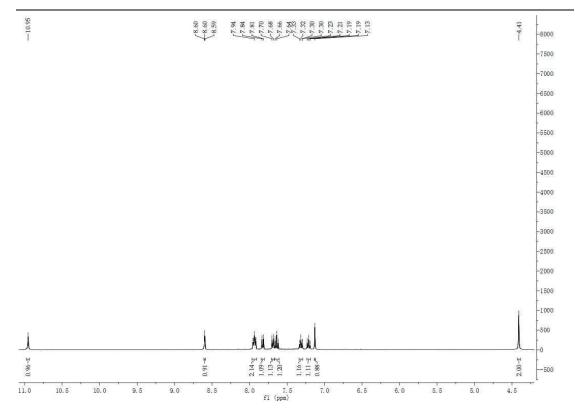


Figure S27. <sup>1</sup>H-NMR spectra of the target compound D06

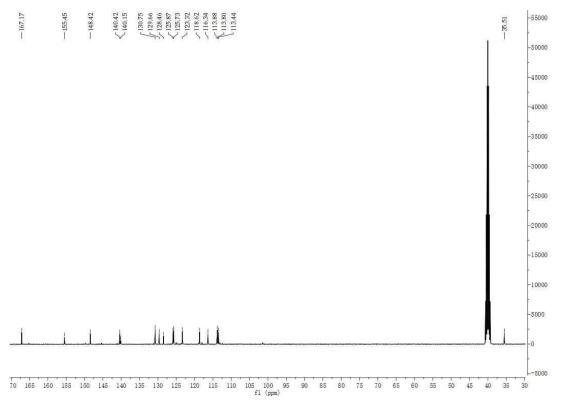


Figure S28. <sup>13</sup> C-NMR spectra of the target compound D06





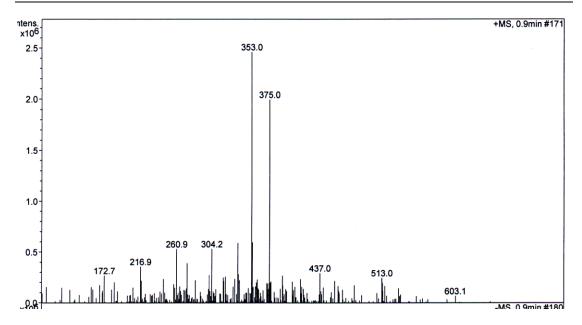


Figure S29. ESI-MS of the target compound D06

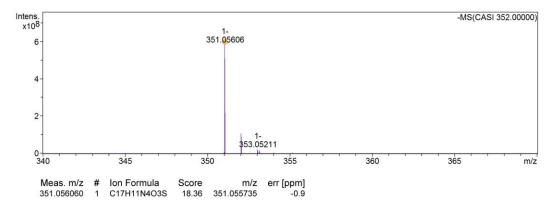


Figure S30. HRMS of the target compound D06





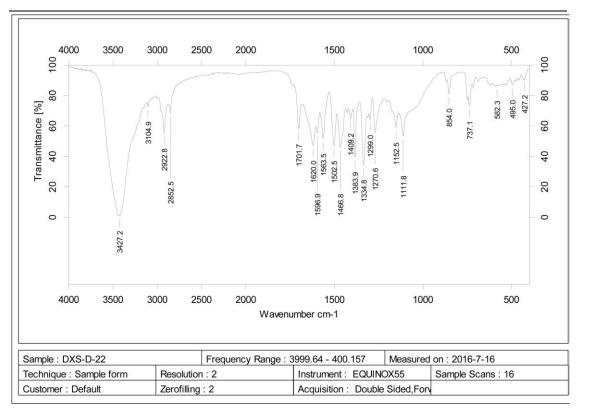


Figure S31. IR spectra of the target compound D07

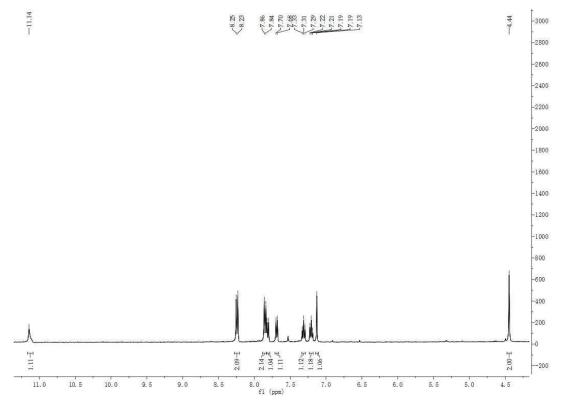


Figure S32. <sup>1</sup>H-NMR spectra of the target compound D07





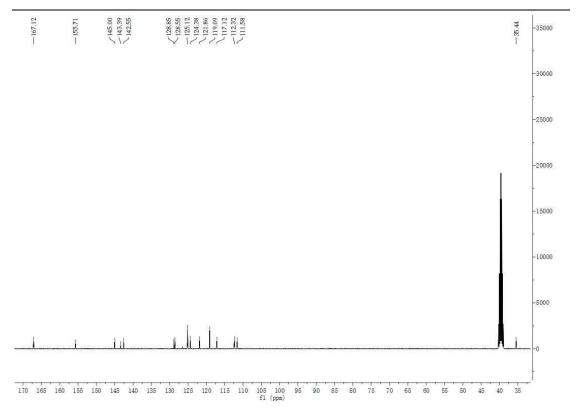


Figure S33. <sup>13</sup>C-NMR spectra of the target compound D07

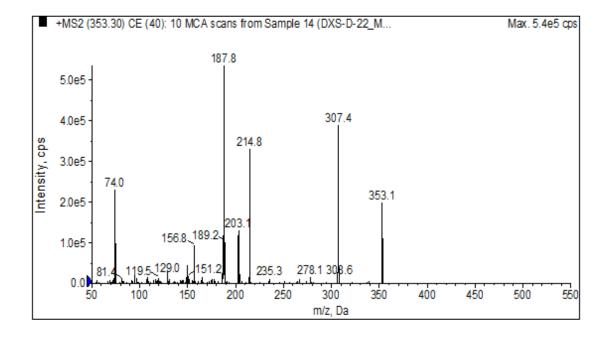


Figure S34. ESI-MS of the target compound D07





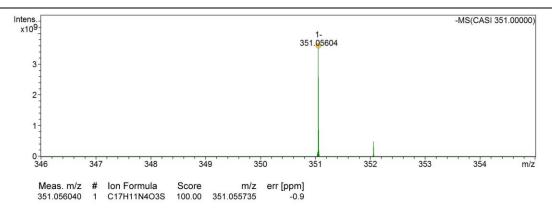


Figure S35. HRMS of the target compound D07

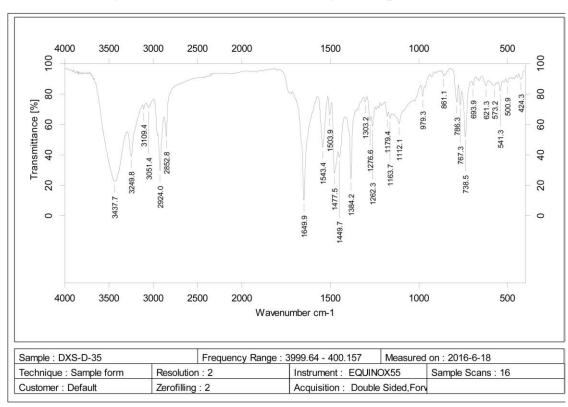


Figure S36. IR spectra of the target compound D08





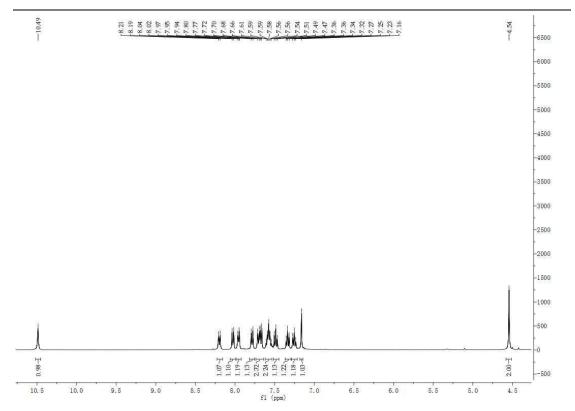


Figure S37. <sup>1</sup>H-NMR spectra of the target compound D08

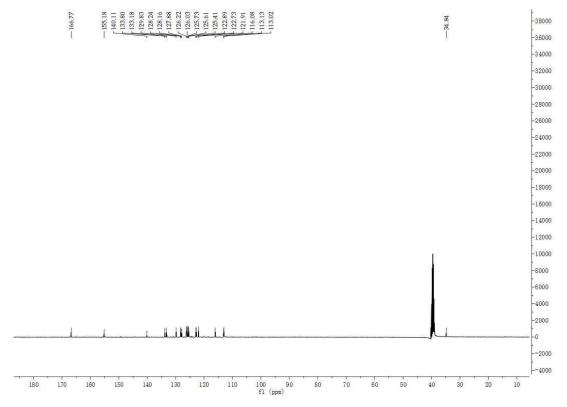


Figure S38. <sup>13</sup>C-NMR spectra of the target compound D08





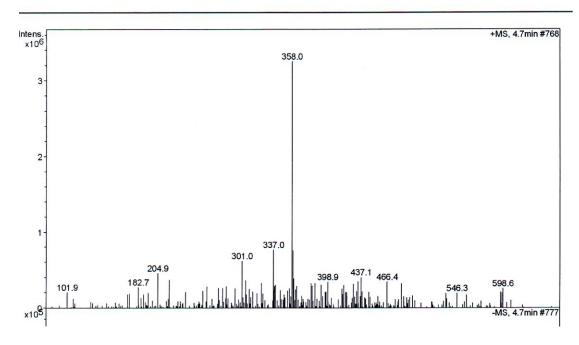


Figure S39. ESI-MS of the target compound D08

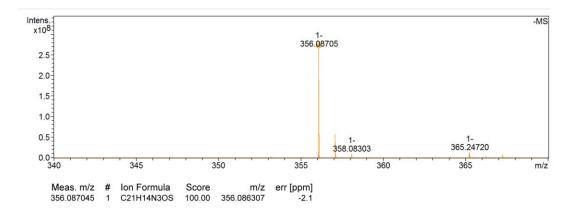


Figure S40. HRMS of the target compound D08





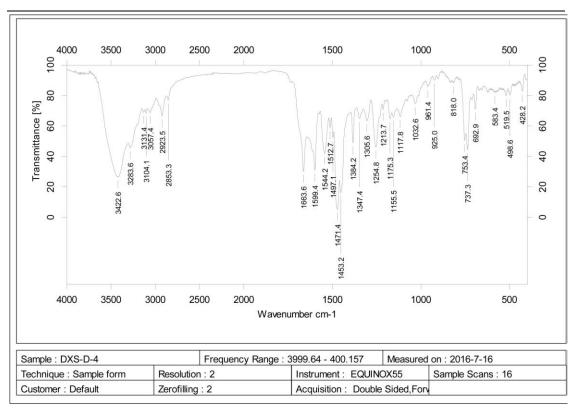


Figure S41. IR spectra of the target compound D09

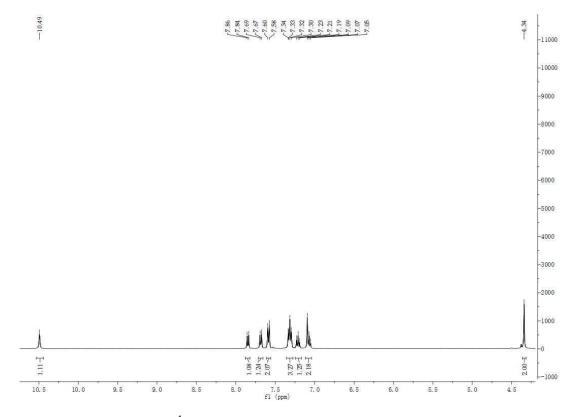


Figure S42. <sup>1</sup> H-NMR spectra of the target compound D09





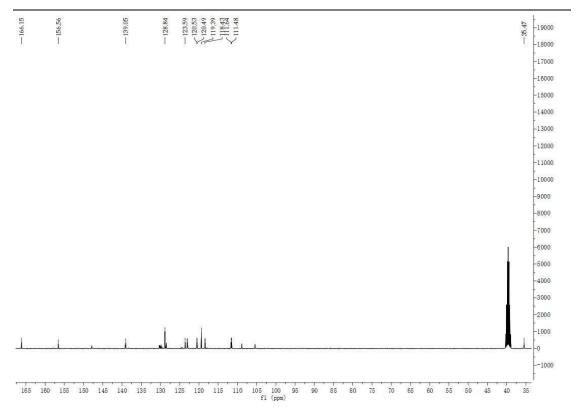


Figure S43. <sup>13</sup>C-NMR spectra of the target compound D09

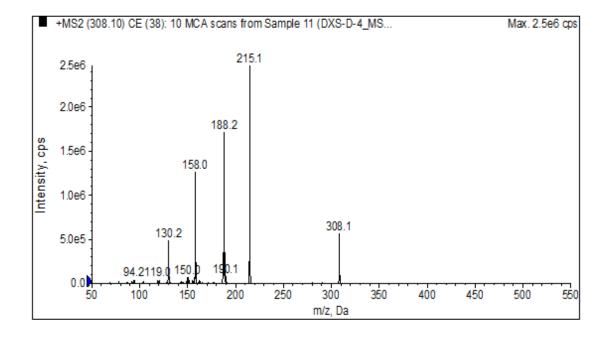


Figure S44. ESI-MS of the target compound D09





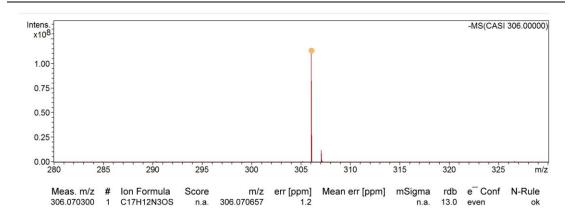


Figure S45. HRMS of the target compound D09

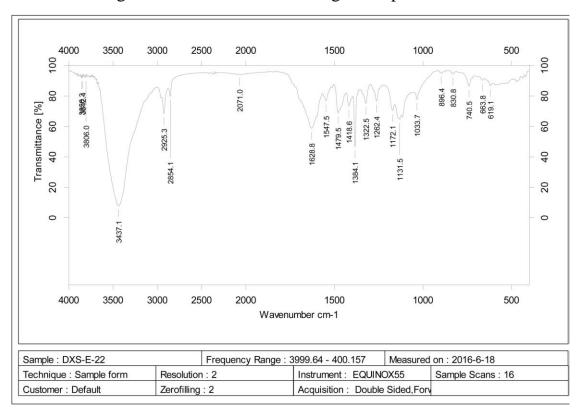


Figure S46. IR spectra of the target compound D10





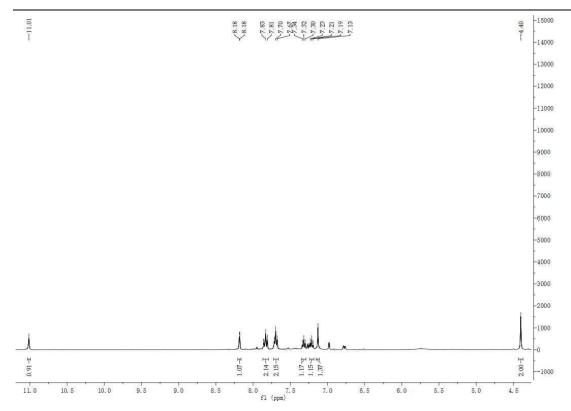


Figure S47. <sup>1</sup> H-NMR spectra of the target compound D10

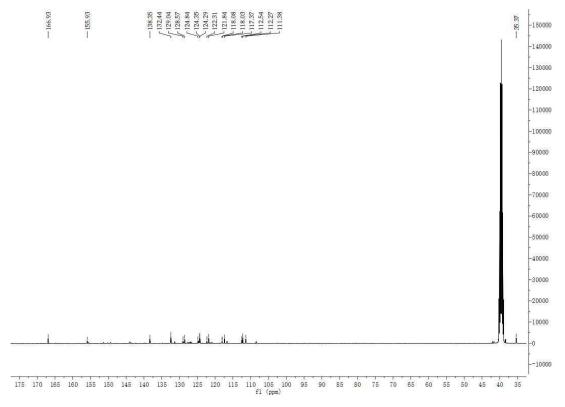


Figure S48. <sup>13</sup>C-NMR spectra of the target compound D10





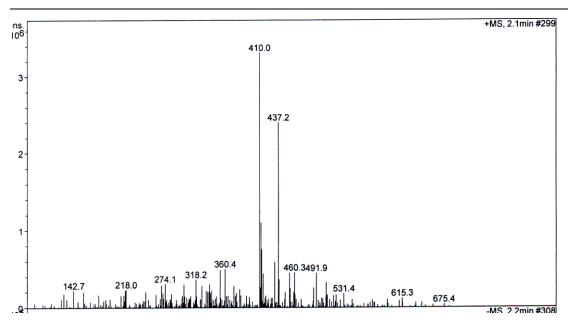


Figure S49. ESI-MS of the target compound D10

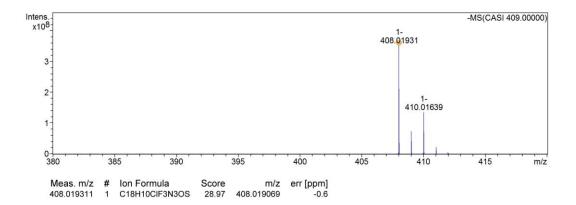


Figure S50. HRMS of the target compound D10





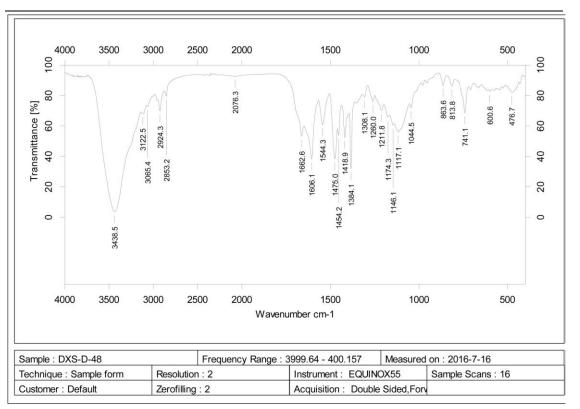


Figure S51. IR spectra of the target compound D11

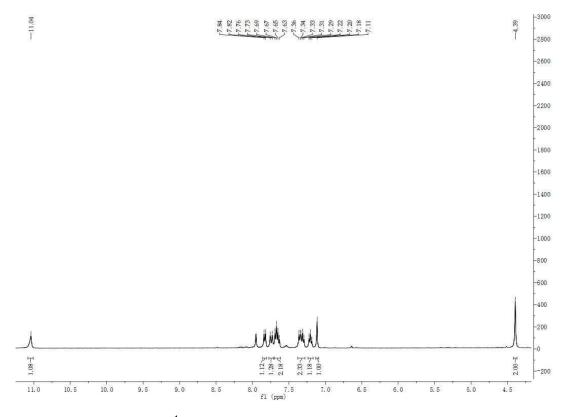


Figure S52. <sup>1</sup> H-NMR spectra of the target compound D11





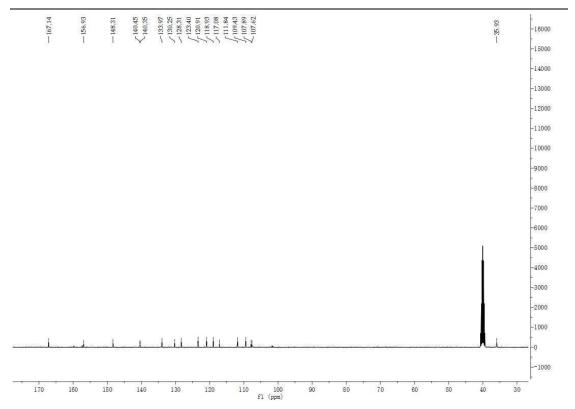


Figure S53. <sup>13</sup>C-NMR spectra of the target compound D11

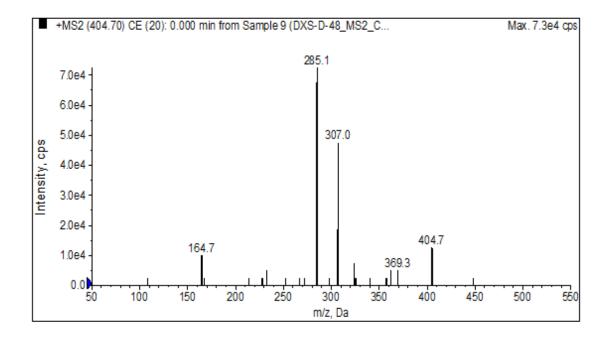


Figure S54. ESI-MS of the target compound D11





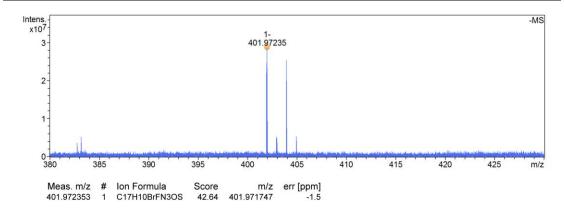


Figure S55. HRMS of the target compound D11

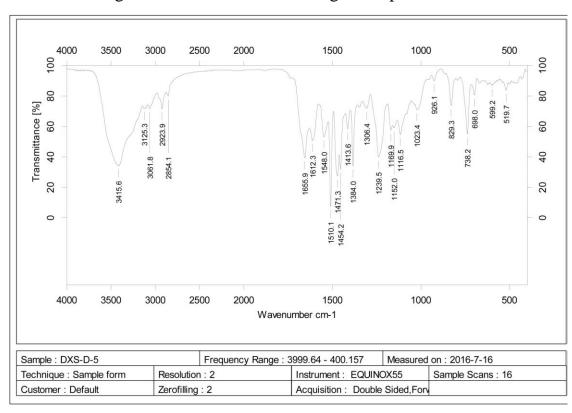


Figure S56. IR spectra of the target compound D12





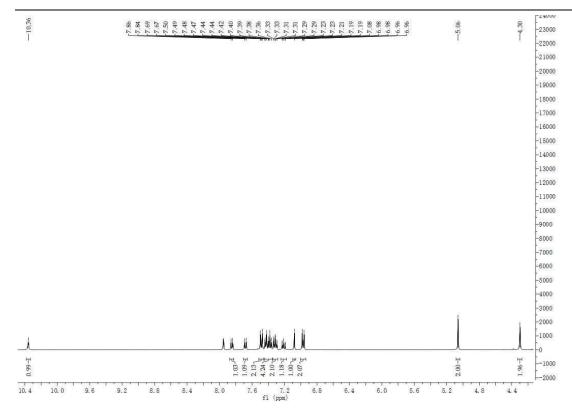


Figure S57. <sup>1</sup> H-NMR spectra of the target compound D12

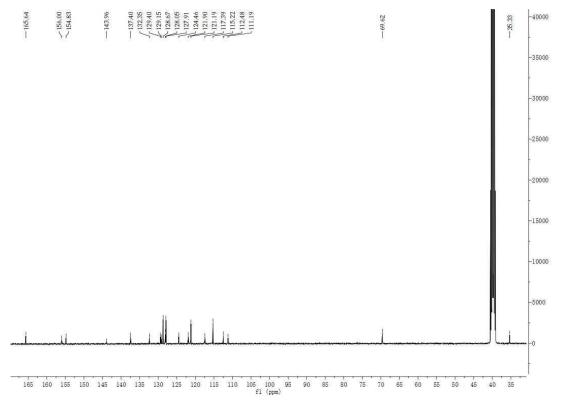


Figure S58. <sup>13</sup>C-NMR spectra of the target compound D12





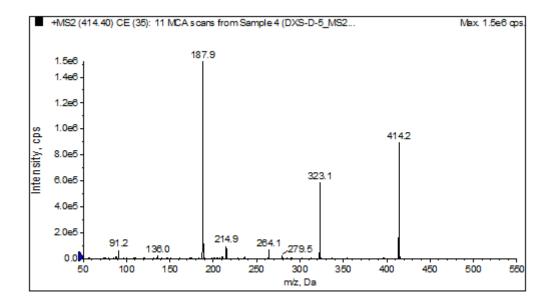


Figure S59. ESI-MS of the target compound D12

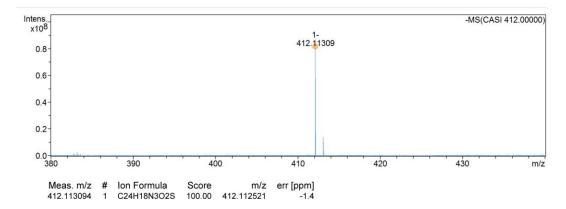


Figure S60. HRMS of the target compound D12





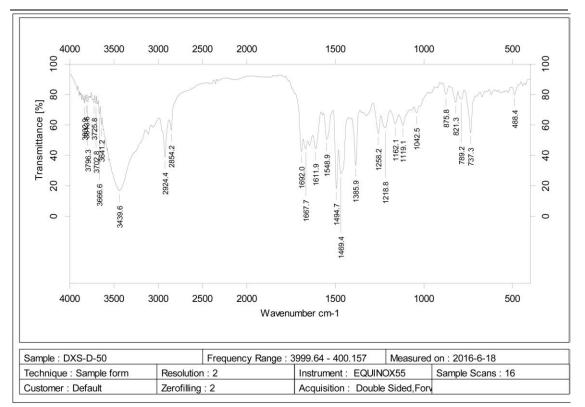


Figure S61. IR spectra of the target compound D13

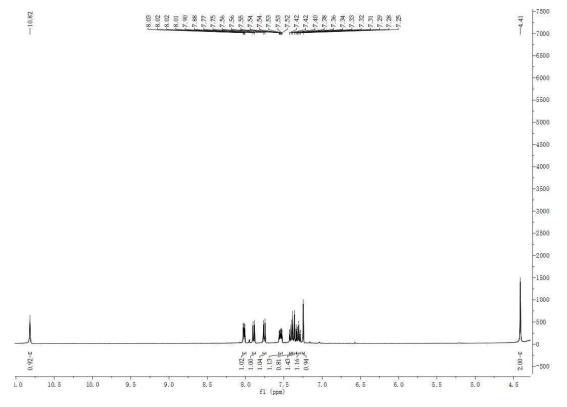


Figure S62. <sup>1</sup> H-NMR spectra of the target compound D13





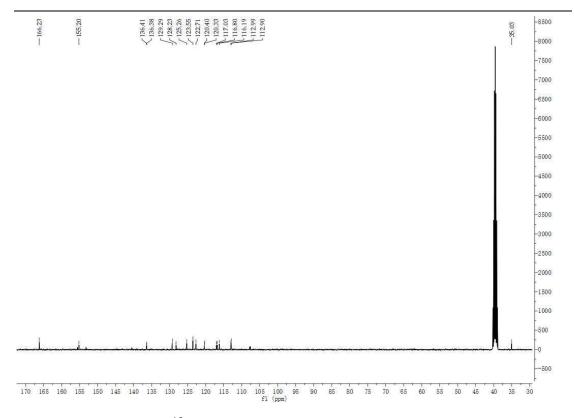


Figure S63. <sup>13</sup> C-NMR spectra of the target compound D13

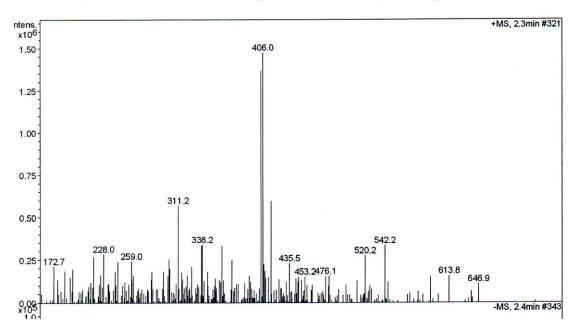


Figure S64. ESI-MS of the target compound D13





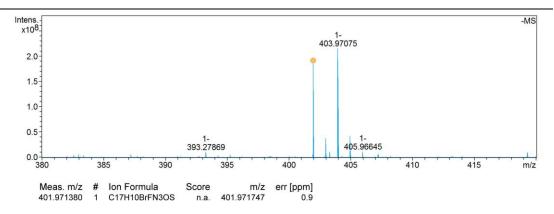


Figure S65. HRMS of the target compound D13

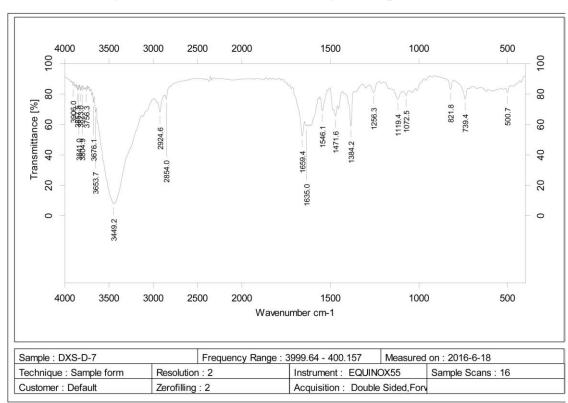


Figure S66. IR spectra of the target compound D14





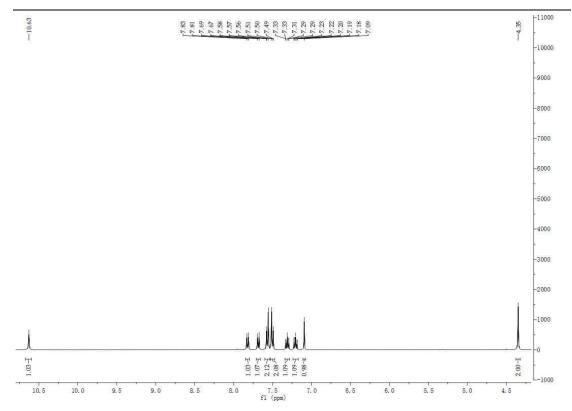


Figure S67. <sup>1</sup> H-NMR spectra of the target compound D14

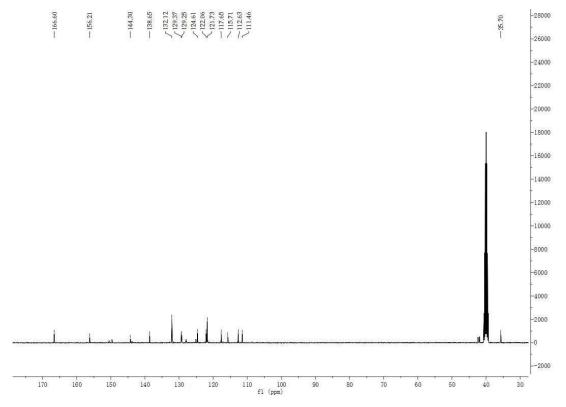


Figure S68. <sup>13</sup> C-NMR spectra of the target compound D14





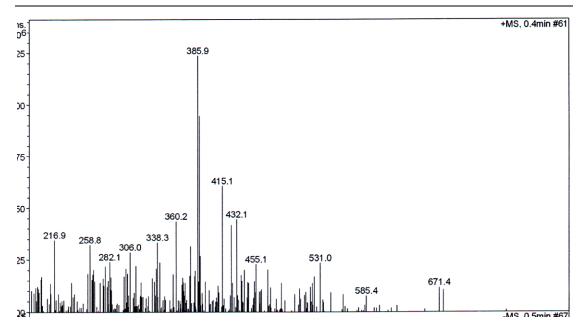


Figure S69. ESI-MS of the target compound D14

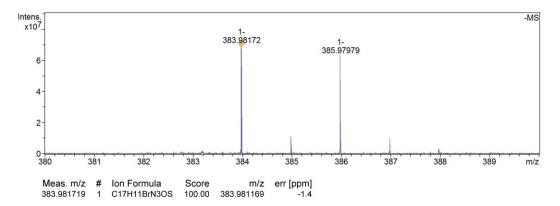


Figure S70. HRMS of the target compound D14





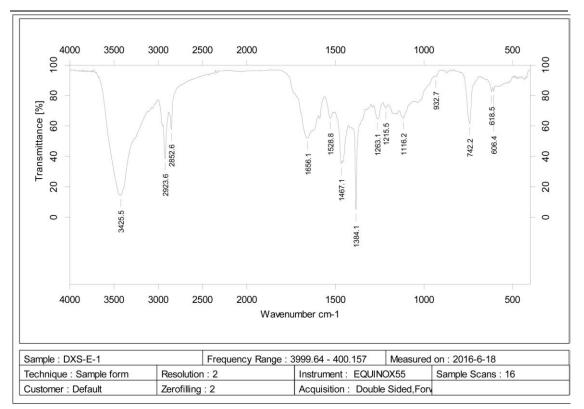


Figure S71. IR spectra of the target compound D15

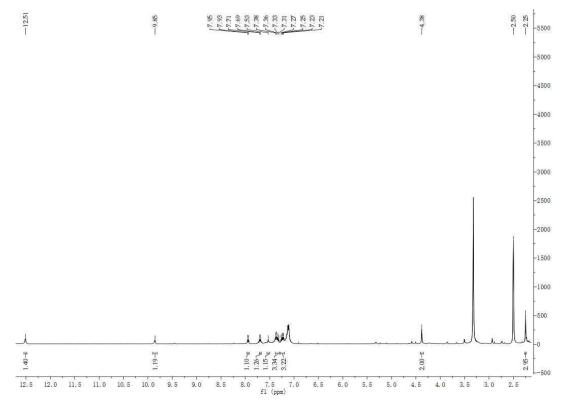


Figure S72. <sup>1</sup> H-NMR spectra of the target compound D15





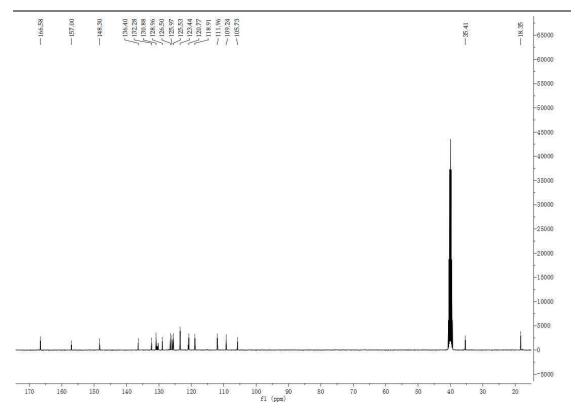


Figure S73. <sup>13</sup>C-NMR spectra of the target compound D15

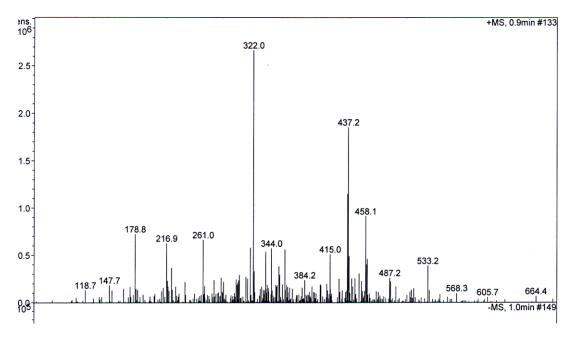


Figure S74. ESI-MS of the target compound D15





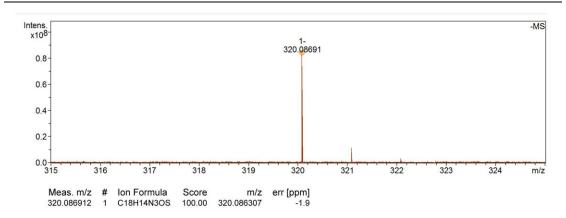


Figure S75. HRMS of the target compound D15

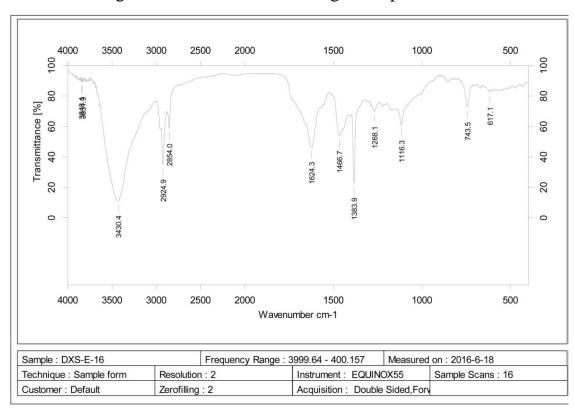


Figure S76. IR spectra of the target compound D16





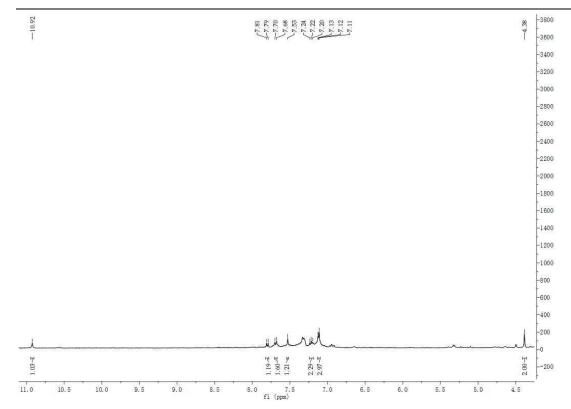


Figure S77. <sup>1</sup>H-NMR spectra of the target compound D16

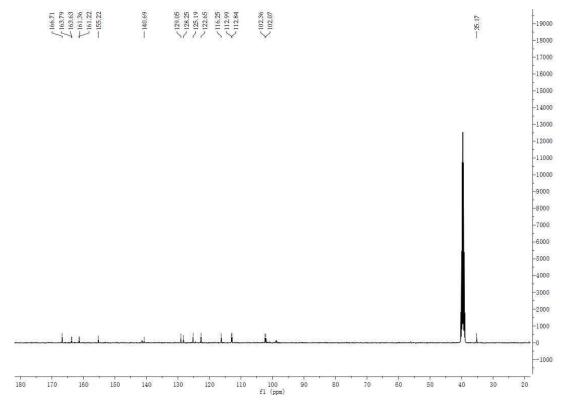


Figure S78. <sup>13</sup>C-NMR spectra of the target compound D16





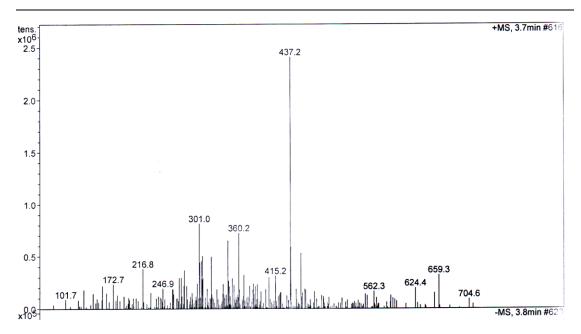


Figure S79. ESI-MS of the target compound D16

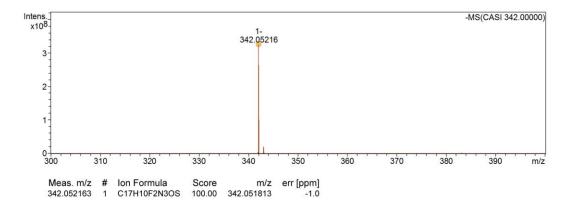


Figure S80. HRMS of the target compound D16





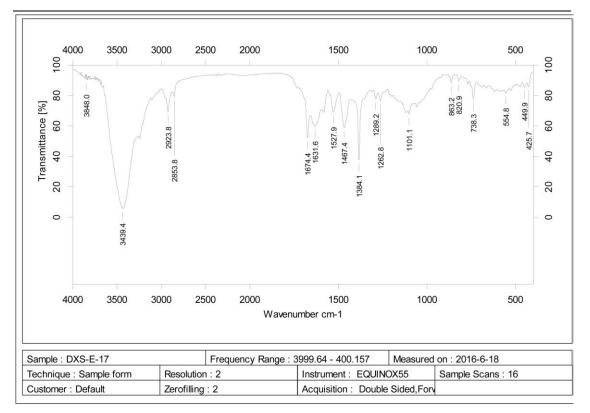


Figure S81. IR spectra of the target compound D17

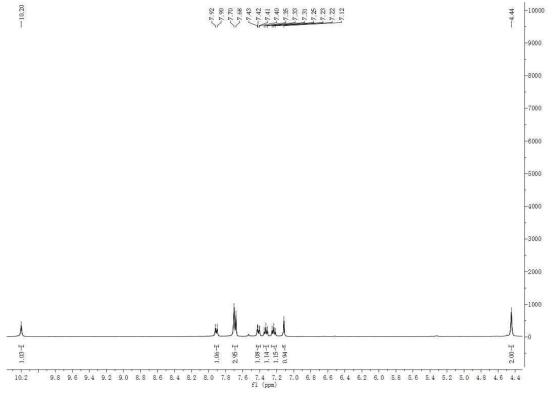


Figure S82. <sup>1</sup> H-NMR spectra of the target compound D17





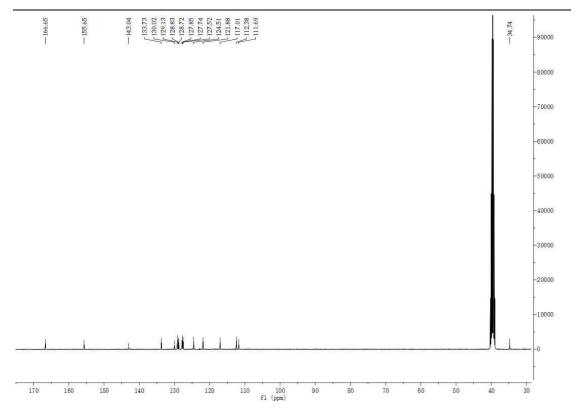


Figure S83. <sup>13</sup> C-NMR spectra of the target compound D17

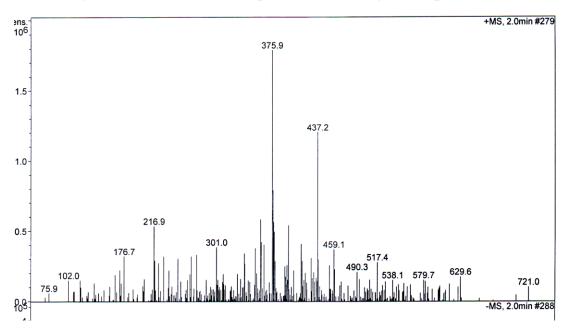


Figure S84. ESI-MS of the target compound D17





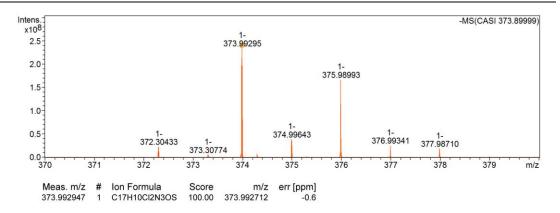


Figure S85. HRMS of the target compound D17

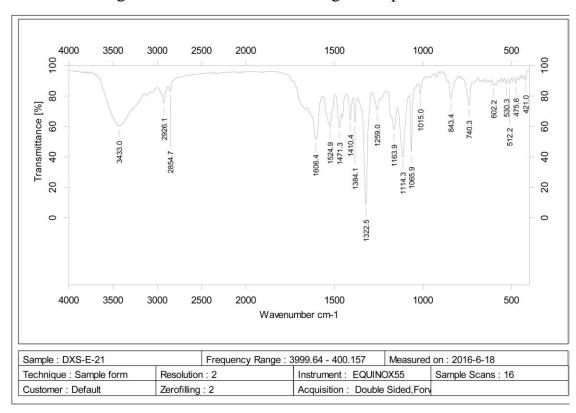


Figure S86. IR spectra of the target compound D18





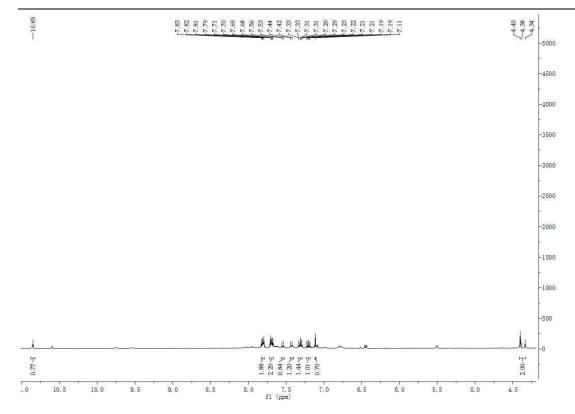


Figure S87. <sup>1</sup> H-NMR spectra of the target compound D18

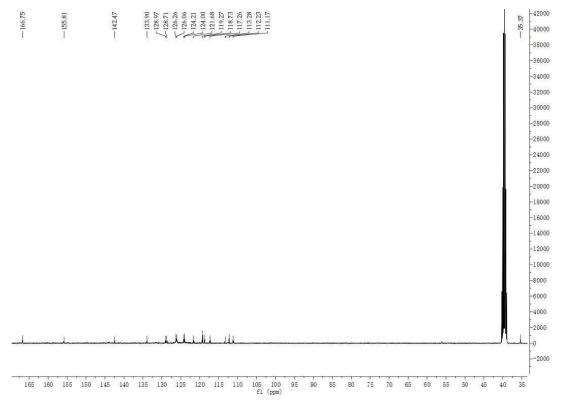


Figure S88. <sup>13</sup>C-NMR spectra of the target compound D18





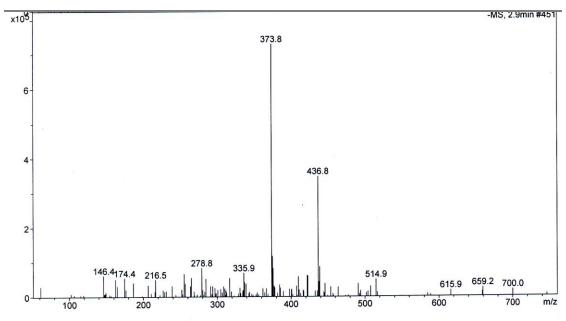


Figure S89. ESI-MS of the target compound D18

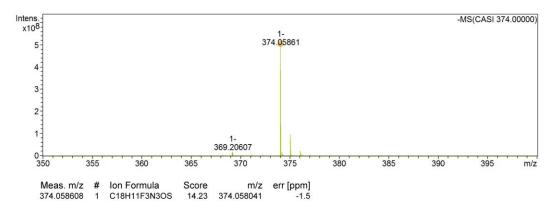


Figure S90. HRMS of the target compound D18