

## Supporting Information

### **Synthesis and *in-vitro* Evaluation of *N*-substituted Maleimide Derivatives as *Selective Monoglyceride Lipase Inhibitors***

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S1-S3 Characteristic infrared peaks of compounds **3- 46** and **49** and elemental analysis data of compounds **12** and **35**.

**1-(2-Methylphenyl)-maleimide (3).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1718, 1389.

**1-(3-Methyl-phenyl)-maleimide (4).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1712, 1378.

**1-(4-Methyl-phenyl)-maleimide (5).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1708, 1390

**1-(2-Ethyl-phenyl)-maleimide (6).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1719, 1394.

**1-(3-Ethyl-phenyl)-maleimide (7).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1710, 1381.

**1-(4-Ethyl-phenyl)-maleimide (8).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1712, 1395.

**1-(4-Propyl-phenyl)-maleimide (9).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1713, 1383.

**1-(2-Isopropyl-phenyl)-maleimide (10).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1722, 1387.

**1-(4-Isopropyl-phenyl)-maleimide (11).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1710, 1398.

**1-(4-Heptyl-phenyl)-pyrrole-2,5-dione (12).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1708, 1518, 1400.

Anal. (C<sub>17</sub>H<sub>21</sub>NO<sub>2</sub>) C,H,N. (C<sub>17</sub>H<sub>21</sub>NO<sub>2</sub>, 1/3 H<sub>2</sub>O), calculated C 73.62, H 7.87, N 5.05, found C 73.09, H 7.86, N 4.89)

**1-(4-Hydroxy-phenyl)-maleimide (13).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1719.

**1-(2-Methoxy-phenyl)-maleimide (14).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1713, 1507, 1397.

**1-(3-Methoxy-phenyl)-maleimide (15).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1712, 1604, 1259.

**1-(4-Methoxy-phenyl)-maleimide (16).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1714, 1517, 1250

**1-(2-Fluoro-phenyl)-maleimide (17).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1719, 1508, 1391.

**1-(3-Fluoro-phenyl)-maleimide (18).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1718, 1397, 1516.

**1-(4-Fluoro-phenyl)-maleimide (19).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1710, 1516, 1231.

**1-(2-Chloro-phenyl)-maleimide (20).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1719, 1487, 1391

**1-(3-Chloro-phenyl)-maleimide (21).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1722, 1386, 1492.

**1-(4-Chloro-phenyl)-maleimide (22).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1718, 1484, 1385.

**1-(2-Bromo-phenyl)-maleimide (23).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1718, 1482, 1389.

**1-(3-Bromo-phenyl)-maleimide (24).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1712, 1479, 1386.

**1-(4-Bromo-phenyl)-maleimide (25).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1712, 1496, 1388.

**1-(2-Iodo-phenyl)-maleimide (26).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1719, 1475, 1388.

**1-(3-Iodo-phenyl)-maleimide (27).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1717, 1474, 1145.

**1-(4-Iodo-phenyl)-maleimide (28).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1720, 1485, 1398.

**1-Biphenyl-2-yl-maleimide (29).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1713, 1484, 1395.

**1-Biphenyl-3-yl-maleimide (30).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1719, 1482, 1427, 1383.

**1-Biphenyl-4-yl-maleimide (31).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1706, 1403.

**1-Benzyl-maleimide (32).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1702, 1311.

**1-Phenethyl-maleimide (33).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1707, 1326.

**1-(4-Phenyl-butyl)-maleimide (34).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1706, 1408.

**1-(4-Ethyl-benzyl)-maleimide (35).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1706, 1404, 1348.

Anal. (C<sub>13</sub>H<sub>13</sub>NO<sub>2</sub>) C,H,N (C<sub>13</sub>H<sub>13</sub>NO<sub>2</sub>) calculated : C<sub>13</sub>H<sub>13</sub>NO<sub>2</sub>.1/4 H<sub>2</sub>O C 71.05, H 6.19, N 6.37, found : C 71.11, H 6.18, N 6.24)

**1-Biphenyl-4-yl-methyl-maleimide (36).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1699, 1439.

**N-phenylsuccinimide (37).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1716.

**N-Phenylphthalimide (38).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 2955, 1774.

**3-methyl-1-phenylmaleimide (39).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1636, 1499.

**3,4-dimethyl-1-phenylmaleimide (40).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 1791.

**1,3-diphenyl-maleimide (41).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 2917, 1721.

**N-nonyl-maleimide (44).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 3086, 2930, 1706.

**N-palmityl-maleimide (45)** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 2914, 2848, 1701.

**N-oleyl-maleimide (46).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 2925, 2854, 1707.

**1,4-bis(malimido)xylene (49).** IR (CHCl<sub>3</sub>, cm<sup>-1</sup>) 2917, 1721.