

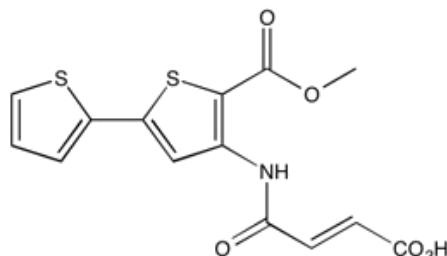
**Catalog # 10-1453**

**HTS01037**

CAS# 682741-29-3

4-[(3-Carboxy-1-oxo-2-propen-1-yl)amino]-[2,2'-bithiophene]-5-carboxylic acid, 5-methyl ester

Lot # FBA4180



Inhibits fatty acid binding proteins. Inhibits lipolysis in 3T3-L1 adipocytes and reduces LPS-stimulated inflammation in cultured macrophages. Acts as an antagonist of the protein-protein interaction between AFABP/aP2 and hormone sensitive lipase but does not activate PPAR $\gamma$  in macrophages<sup>1</sup>. Inhibits FABP-dependent and fatty acid-stimulated leukotriene C<sub>4</sub> biosynthesis<sup>2</sup>. Reduces intracellular free fatty acid levels, lowering macrophage inflammation and ER stress<sup>3</sup>. Reduces LPS-stimulated IL-1 $\beta$  secretion in a mouse model<sup>4</sup>. Inhibits VLDL-induced foam cell formation<sup>5</sup>.

- 1) Hertz et al. (2009), *Identification and characterization of a small molecule inhibitor of Fatty Acid binding proteins*; J. Med. Chem, **52** 6024
- 2) Long et al. (2012), *Fatty acids induce leukotriene C4 synthesis in macrophages in a fatty acid binding protein-dependent manner*; Biochim. Biophys. Acta, **1831** 1199
- 3) Xu et al. (2015), *Uncoupling lipid metabolism from inflammation through fatty acid binding protein-dependent expression of USP2*; Mol. Cell. Biol., **35** 1055
- 4) Steen et al. (2016), *FABP4/aP2 regulates macrophage redox signaling and inflammasome activation via control of UCP2*; Mol. Cell. Biol., Epub ahead of print, Oct. 17
- 5) Boss et al. (2015), *FABP4 inhibition suppresses PPARgamma activity and VLDL-induced foam cell formation in IL-4-polarized human macrophages*; Atherosclerosis, **240** 424

**PHYSICAL DATA**

|                        |  |
|------------------------|--|
| Molecular Weight:      | 337.37   |
| Molecular Formula:     | C <sub>14</sub> H <sub>11</sub> NO <sub>5</sub> S <sub>2</sub>   |
| Purity:                | 98% by HPLC  |
|                        | NMR: (Conforms)  |
| Solubility:            | Soluble in DMSO (up to 50 mg/ml)   |
| Physical Description:  | Yellow solid   |
| Storage and Stability: | Store as supplied, desiccated at room temperature for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 2 months. |

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**