

# PRODUCT INFORMATION



## HTS 01037

Item No. 10699

**CAS Registry No.:** 682741-29-3  
**Formal Name:** 4-[(3-carboxy-1-oxo-2-propen-1-yl)amino]-[2,2'-bithiophene]-5-carboxylic acid, 5-methyl ester

**MF:** C<sub>14</sub>H<sub>11</sub>NO<sub>5</sub>S<sub>2</sub>

**FW:** 337.4

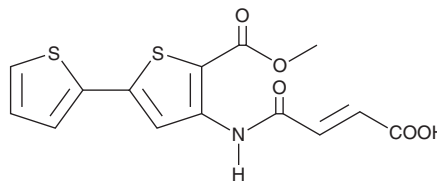
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 331 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

HTS 01037 is supplied as a crystalline solid. A stock solution may be made by dissolving the HTS 01037 in the solvent of choice, which should be purged with an inert gas. HTS 01037 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of HTS 01037 in these solvents is approximately 3 mg/ml.

HTS 01037 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HTS 01037 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. HTS 01037 has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Adipocyte fatty acid binding protein (A-FABP/aP2) is a carrier protein expressed in both adipocytes and macrophages where it functions in intracellular fatty acid solubilization, trafficking, and metabolism.<sup>1</sup> Molecular disruption of A-FABP/aP2 in mice results in improved insulin sensitivity and protection from atherosclerosis.<sup>2,3</sup> HTS 01037 is a high-affinity ligand of A-FABP/aP2 ( $K_i = 0.67 \mu\text{M}$ ) that presumably competes with fatty acids for functional binding in the ligand-binding cavity of A-FABP/aP2.<sup>4</sup> At a concentration of 10  $\mu\text{M}$ , HTS 01037 antagonizes the protein-protein interaction of A-FABP/aP2 with hormone sensitive lipase in cultured C8PA lipocytes.<sup>4</sup> HTS 01037 inhibits lipolysis in 3T3L1 adipocytes and reduces lipopolysaccharide-stimulated inflammation in bone marrow-derived macrophages, both effects of which are similar to the phenotype of A-FABP/aP2 knockout mice.<sup>4</sup>

### References

1. Massolini, G. and Calleri, E. *J. Chromatogr. B* **797**, 255-268 (2003).
2. Perrella, M.A., Pellacani, A., Layne, M.D., et al. *FASEB J.* **15**, 1774-1776 (2001).
3. Furuhashi, M., Tuncman, G., Görgün, C.Z., et al. *Nature* **447**, 959-965 (2007).
4. Hertzel, A.V., Hellberg, K., Reynolds, J.M., et al. *J. Med. Chem.* **52**, 6024-6031 (2009).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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