# Product data sheet

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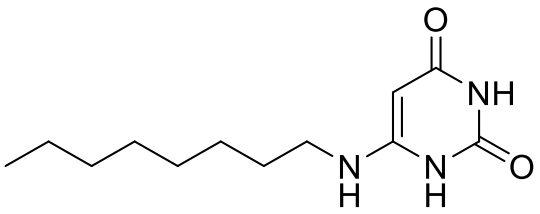
|---|---|
| MedKoo Cat#: 531170<br>Name: GTPL5846<br>CAS: 83797-69-7<br>Chemical Formula: $C_{12}H_{21}N_3O_2$<br>Exact Mass: 239.1634<br>Molecular Weight: 239.319 |  |
| Product supplied as: | Powder |
| Purity (by HPLC): | ≥ 98% |
| Shipping conditions | Ambient temperature |
| Storage conditions: | Powder: -20°C 3 years; 4°C 2 years. |
| | In solvent: -80°C 3 months; -20°C 2 weeks. |

**1. Product description:**
GTPL5846 increases chemotaxis of polymorphonuclear leukocytes and macrophages and stimulates production of pro-inflammatory cytokines.

**2. CoA, QC data, SDS, and handling instruction**
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

**3. Solubility data**

| Solvent | Max Conc. mg/mL | Max Conc. mM |
|---|---|---|
| DMSO | 30.0 | 125.36 |

**4. Stock solution preparation table:**

| Concentration / Solvent Volume / Mass | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 4.18 mL | 20.89 mL | 41.79 mL |
| 5 mM | 0.84 mL | 4.18 mL | 8.36 mL |
| 10 mM | 0.42 mL | 2.09 mL | 4.18 mL |
| 50 mM | 0.08 mL | 0.42 mL | 0.84 mL |

**5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator**
Please refer the product web page under section of "Calculator"

**6. Recommended literature which reported protocols for in vitro and in vivo study**
In vitro study

1. Wei L, Tokizane K, Konishi H, Yu HR, Kiyama H. Agonists for G-protein-coupled receptor 84 (GPR84) alter cellular morphology and motility but do not induce pro-inflammatory responses in microglia. J Neuroinflammation. 2017 Oct 3;14(1):198. doi: 10.1186/s12974-017-0970-y. PMID: 28974234; PMCID: PMC5627487.
2. Suzuki M, Takaishi S, Nagasaki M, Onozawa Y, Iino I, Maeda H, Komai T, Oda T. Medium-chain fatty acid-sensing receptor, GPR84, is a proinflammatory receptor. J Biol Chem. 2013 Apr 12;288(15):10684-91. doi: 10.1074/jbc.M112.420042. Epub 2013 Feb 28. PMID: 23449982; PMCID: PMC3624448.

In vivo study

1. Reyes AWB, Kim H, Huy TXN, Vu SH, Nguyen TT, Kang CK, Min W, Lee HJ, Lee JH, Kim S. Immune-metabolic receptor GPR84 surrogate and endogenous agonists, 6-OAU and lauric acid, alter Brucella abortus 544 infection in both in vitro and in vivo systems. Microb Pathog. 2021 Sep;158:105079. doi: 10.1016/j.micpath.2021.105079. Epub 2021 Jul 8. PMID: 34245824.

**7. Bioactivity**
Biological target:

6-OAU (GTPL5846) (6-n-octylaminouracil) is an GPR84 (G protein-coupled receptor 84) agonist, with an $EC_{50}$ value of 105 nM.

In vitro activity

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Rather, 6-OAU significantly suppressed mRNA expression of IL-6 (1 μM, $p = 0.019$) and IL-12 p40 (0.1 μM, $p = 0.02$) (Fig. 1a).

Reference: J Neuroinflammation. 2017 Oct 3;14(1):198. https://pubmed.ncbi.nlm.nih.gov/28974234/

In vivo activity

The in vivo studies showed that both treatments via oral route augmented resistance to Brucella infection but more pronounced with 6-OAU as observed with reduced bacterial proliferation in spleens and livers. At 7 d post-treatment and 14 d post-infection, 6-OAU-treated mice displayed reduced IFN-γ serum level.

Reference: Microb Pathog. 2021 Sep;158:105079. https://pubmed.ncbi.nlm.nih.gov/34245824/