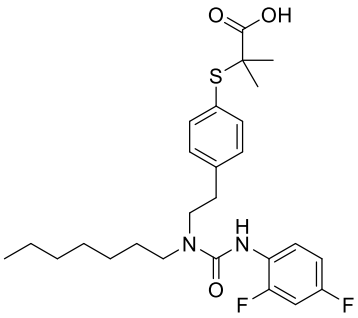
Product data sheet

MedKoo Cat#: 531943 Name: GW9578 CAS: 247923-29-1 Chemical Formula: $C_{26}H_{34}F_2N_2O_3S$ Exact Mass: 492.2258 Molecular Weight: 492.6258	
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:
GW 9578 is a potent agonist of PPARα that activates the murine and human receptors with EC50 values of 0.005 and 0.05 µM. GW 9578 is a potent lipid lowering agent that may reduce insulin resistance.

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
DMF	10.0	20.30
DMSO	10.0	20.30
DMSO:PBS (pH 7.2) (1:2)	0.3	0.61
Ethanol	2.5	5.07

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.03 mL	10.15 mL	20.30 mL
5 mM	0.41 mL	2.03 mL	4.06 mL
10 mM	0.20 mL	1.02 mL	2.03 mL
50 mM	0.04 mL	0.20 mL	0.41 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. Reynolds WF, Kumar AP, Piedrafita FJ. The human myeloperoxidase gene is regulated by LXR and PPARalpha ligands. Biochem Biophys Res Commun. 2006 Oct 20;349(2):846-54. doi: 10.1016/j.bbrc.2006.08.119. Epub 2006 Aug 31. PMID: 16956579; PMCID: PMC1831877.

In vivo study

1. Guerre-Millo M, Gervois P, Raspé E, Madsen L, Poulain P, Derudas B, Herbert JM, Winegar DA, Willson TM, Fruchart JC, Berge RK, Staels B. Peroxisome proliferator-activated receptor alpha activators improve insulin sensitivity and reduce adiposity. J Biol Chem. 2000 Jun 2;275(22):16638-42. doi: 10.1074/jbc.275.22.16638. PMID: 10828060.

7. Bioactivity
Biological target:

GW9578 is a subtype-selective PPARα agonist (EC_{50}s of 5 and 50 nM for murine and human PPAR-α) with potent lipid-lowering activity.

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In vitro activity

PPARα ligand GW9578 downregulated TgMPO-G in GMCSF-Mφ, while upregulating in MCSF-Mφ (lanes 4).

Reference: Biochem Biophys Res Commun. 2006 Oct 20;349(2):846-54. https://pubmed.ncbi.nlm.nih.gov/16956579/

In vivo activity

Treatment with GW9578 resulted in markedly reduced serum insulin concentrations, whereas serum glucose levels were not affected (Fig. 6). Thus, as with ciprofibrate, treatment with GW9578 resulted in efficient PPARα activation, whereas PPARγ was not activated in these rats.

Reference: J Biol Chem. 2000 Jun 2;275(22):16638-42. https://pubmed.ncbi.nlm.nih.gov/10828060/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.