

Product Data Sheet

Product Name: GSK837149A

Cat. No.: GC15820

Chemical Properties

Cas. No. 13616-29-0

Chemical Name 4,4'-(carbonyldiimino)bis[N-(4-methyl-2-pyrimidinyl)-benzenesulfonamide]

SMILES CC1=CC=NC(NS(C2=CC=C(NC(NC3=CC=C(S(NC4=NC=CC(C)=N4)(=O)=O)C=C3)=O)C=C2)(=O)=O)=N1

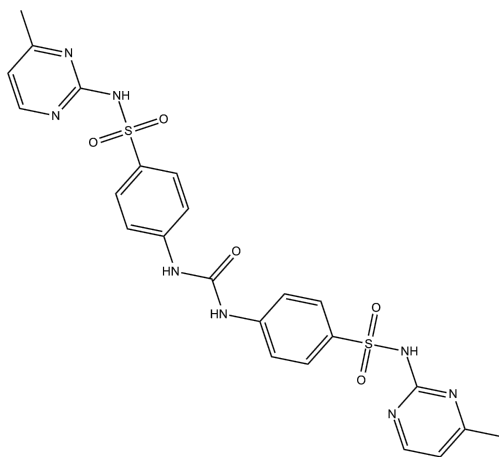
Formula $C_{23}H_{22}N_8O_5S_2$ M.Wt 554.6

Solubility $\leq 5\text{mg/ml}$ in DMSO; 5mg/ml in dimethyl formamide Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

GSK837149A is a selective and reversible inhibitor of fatty acid synthase (FAS) [1].

Fatty acids are essential for all the living cells and have a diversity of biological functions. Fatty acids

Caution: Product has not been fully validated for medical applications. For research use only.

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are fundamental aliphatic acids served as energy production and storage, cellular structure and as intermediates in the biosynthesis of hormones and other biologically important molecules. In cells, fatty acids provide structural integrity to cellular membranes and cell walls. Fatty acids have been also involved in the transmission of cellular signals and can be used to modify proteins during post-translational processing. Fatty acid synthase has been involved in catalyzing the formation of long-chain fatty acids from acetyl-CoA and malonyl-CoA in the presence of NADPH [1].

GSK837149A inhibited FAS in a reversible manner, with a K_i value of ~30 nm. GSK837149A possibly bound to the enzyme–ketoacyl-ACP complex [1]. GSK837149A selectively and reversibly inhibited the activity of FAS with the IC_{50} of 7.8 [1]. GSK837149A functioned by inhibiting the β -ketoacyl reductase activity of FAS [1].

Reference:

[1] Vázquez M J, Leavens W, Liu R, et al. Discovery of GSK837149A, an inhibitor of human fatty acid synthase targeting the β -ketoacyl reductase reaction[J]. FEBS journal, 2008, 275(7): 1556-1567.

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