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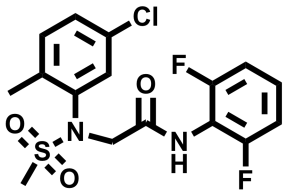
Hepatocytes Functional Proliferation Inducer – FPH1

Chemical Name: 2-(N-(5-chloro-2-methylphenyl)methylsulfonamido)-N-(2,6-difluorophenyl)acetamide



Molecular Weight:	388.82
Formula:	$C_{16}H_{15}ClF_2N_2O_3S$
Purity:	≥98%
CAS#:	708219-39-0
Solubility:	DMSO up to 100 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

FPH1 is a potent and selective small molecule that induced **F**unctional **P**roliferation of primary human **H**epatocytes in vitro, identified by a high-throughput, cell-based screening using primary human hepatocytes. It induced a significant increase in hepatocyte number and elevated the number of hepatocytes undergoing mitosis in a dose-dependent manner. Cells treated with FPH1 also maintained their liver-specific functions. Immunofluorescence staining for Ki67 and albumin, along with FACS-based cell counting, revealed that hepatocytes from a wide range of genetically diverse individuals could be expanded and normal hepatocytes functions could be maintained after expansion. FPH1 can also promote the differentiation of iPS cells toward a hepatic lineage and promote the maturation of induced hepatic cells toward a more adult-like liver phenotype.

How to Use:

In vitro: FPH1 was suggested to be supplemented into the culture medium on day 1 and 5 at a concentration of 15-20 μM to induce functional proliferation of primary human hepatocytes in vitro.

In vivo: n/a

Reference:

1. Shan J, et al. Identification of small molecules for human hepatocyte expansion and iPS differentiation. (2013) Nat Chem Biol. 9(8):514-20.