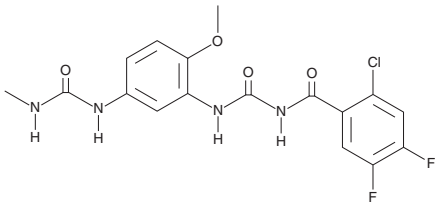
PRODUCT INFORMATION

Glycogen Phosphorylase Inhibitor

Item No. 17578

CAS Registry No.: 648926-15-2
Formal Name: 2-chloro-4,5-difluoro-N-[[[2-methoxy-5-[[(methylamino)carbonyl]amino]phenyl]amino]carbonyl]-benzamide
Synonym: GPI
MF: $C_{17}H_{15}ClF_2N_4O_4$
FW: 412.8
Purity: ≥98%
UV/Vis.: λ_{max}: 238, 302 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

Glycogen phosphorylase inhibitor is supplied as a crystalline solid. A stock solution may be made by dissolving the glycogen phosphorylase inhibitor in the solvent of choice, which should be purged with an inert gas. Glycogen phosphorylase inhibitor is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of glycogen phosphorylase inhibitor in these solvents is approximately 5 mg/ml.

Description

Glycogen phosphorylase in the liver, muscle, and brain initiate glycogenolysis by releasing glucose-1-phosphate from glycogen. Glycogen phosphorylase inhibitor is a cell-permeable acyl urea first identified as an inhibitor of human liver glycogen phosphorylase (IC_{50} = 53 nM).[1] It blocks glucagon-induced hepatic glycogenolysis *in vivo*.[1] Glycogen phosphorylase inhibitor has been used to study glycogen utilization in human liver HepG2 cells, retinal explants, and human T lymphocyte Kit 225 cells.[2-4]

References

1. Klabunde, T., Wendt, K.U., Kadereit, D., *et al.* Acyl ureas as human liver glycogen phosphorylase inhibitors for the treatment of type 2 diabetes. *J. Med. Chem.* **48(20)**, 6178-6193 (2005).
2. Cheng, A., Zhang, M., Gentry, M.S., *et al.* A role for AGL ubiquitination in the glycogen storage disorders of Lafora and Cori's disease. *Genes Dev.* **21(19)**, 2399-2409 (2007).
3. Agathocleous, M., Love, N.K., Randlett, O., *et al.* Metabolic differentiation in retinal cells. *Nat. Cell Biol.* **14(8)**, 859-864 (2012).
4. Arrizabalaga, O., Lacerda, H.M., Zubiaga, A.M., *et al.* Rac1 protein regulates glycogen phosphorylase activation and controls interleukin (IL)-2-dependent T cell proliferation. *J. Biol. Chem.* **287(15)**, 11878-11890 (2012).

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