

PRODUCT INFORMATION



GC376 (sodium salt)

Item No. 31469

CAS Registry No.: 1416992-39-6
Formal Name: (β S)- α -hydroxy- β -[[[(2S)-4-methyl-1-oxo-2-[[[phenylmethoxy]carbonyl]amino]pentyl]amino]-2-oxo-3-pyrrolidinepropanesulfonic acid, monosodium salt

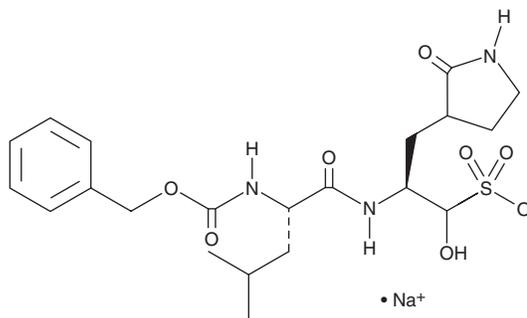
MF: C₂₁H₃₀N₃O₈S • Na
FW: 507.5

Purity: \geq 90%

Supplied as: A crystalline solid

Storage: -20°C

Stability: \geq 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

GC376 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the GC376 (sodium salt) in the solvent of choice, which should be purged with an inert gas. GC376 (sodium salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of GC376 (sodium salt) in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of GC376 (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of GC376 (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

GC376 is an inhibitor of 3C- and 3C-like proteases.¹ It inhibits recombinant poliovirus, foot and mouth disease virus (FMDV), and human rhinovirus (HRV) 3C proteases (IC₅₀s = 1.77, 1.16, and 0.2 μ M, respectively). GC376 also inhibits recombinant Norwalk virus, MD145 virus, transmissible gastroenteritis virus (TGEV), and severe acute respiratory syndrome coronavirus (SARS-CoV) 3C-like proteases (IC₅₀s = 0.49, 0.96, 0.82 and 4.35 μ M, respectively). It reduces the cytopathic effect of SARS-CoV-2 in infected Vero E6 cells (EC₅₀ = 3.37 μ M).² GC376 also reduces liver viral titers by 9.86- and 21.99-fold in a model of murine hepatitis virus (MHV A59) infection when administered at doses of 50 and 100 mg/kg per day, respectively.³

References

1. Kim, Y., Lovell, S., Tiew, K.-C., *et al.* Broad-spectrum antivirals against 3C or 3C-like proteases of picornaviruses, noroviruses, and coronaviruses. *J. Virol.* **86**(21), 11754-11762 (2012).
2. Ma, C., Sacco, M.D., Hurst, B., *et al.* Boceprevir, GC-376, and calpain inhibitors II, XII inhibit SARS-CoV-2 viral replication by targeting the viral main protease. *Cell Res.* **30**(8), 678-692 (2020).
3. Kim, Y., Shivanna, V., Narayanan, S., *et al.* Broad-spectrum inhibitors against 3C-like proteases of feline coronaviruses and feline caliciviruses. *J. Virol.* **89**(9), 4942-50 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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