

Product Data Sheet

Product Name: HEPES-d18

Cat. No.: GC71734

Chemical Properties

Cas. No. 203805-87-2

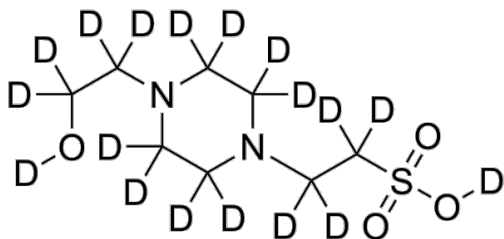
Formula $C_8D_{18}N_2O_4S$ M.Wt 256.42

Solubility H_2O : 100 mg/mL (389.99 mM; Need ultrasonic) Storage $-20^{\circ}C$

General tips For obtaining a higher solubility , please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ 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

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

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HEPES-d18 is the deuterium labeled HEPES[1]. HEPES, a nonvolatile zwitterionic chemical buffering agent, is broadly applied in cell culture. HEPES is effective at pH 6.8 to 8.2. HEPES is also a potent inducer of lysosome biogenesis[2][3][4].

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].

References:

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Suzuki T, et al. Nonvolatile buffer coating of titanium to prevent its biological aging and for drug delivery. *Biomaterials*. 2010;31(18):4818-4828.
- [3]. Sledź P, et al. An experimental charge density of HEPES. *Acta Crystallogr B*. 201066(Pt 4):482-492.
- [4]. Tol MJ, et al. HEPES activates a Mit/TFE-dependent lysosomal-autophagic gene network in cultured cells: A call for caution. *Autophagy*. 201814(3):437-449.

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