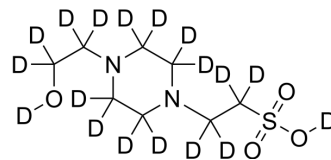


HEPES-d₁₈

Cat. No.:	HY-D0857S		
CAS No.:	203805-87-2		
Molecular Formula:	C ₈ D ₁₈ N ₂ O ₄ S		
Molecular Weight:	256.42		
Target:	Isotope-Labeled Compounds		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (389.99 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.8999 mL	19.4993 mL	38.9985 mL
	5 mM	0.7800 mL	3.8999 mL	7.7997 mL
	10 mM	0.3900 mL	1.9499 mL	3.8999 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

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].

In Vitro

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].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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]. Sledz P, et al. An experimental charge density of HEPES. *Acta Crystallogr B*. 201066(Pt 4):482-492.

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

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