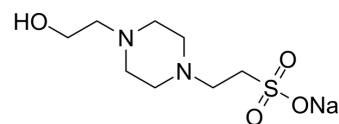


## HEPES sodium

Cat. No.:	HY-108535
CAS No.:	75277-39-3
Molecular Formula:	C <sub>8</sub> H <sub>17</sub> N <sub>2</sub> NaO <sub>4</sub> S
Molecular Weight:	260.29
Target:	Biochemical Assay Reagents
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	DMSO : 25 mg/mL (96.05 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM		3.8419 mL	19.2093 mL	38.4187 mL
		5 mM		0.7684 mL	3.8419 mL	7.6837 mL
		10 mM		0.3842 mL	1.9209 mL	3.8419 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (9.60 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.60 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (9.60 mM); Clear solution					

### BIOLOGICAL ACTIVITY

Description	HEPES sodium, a nonvolatile zwitterionic chemical buffering agent, is broadly applied in cell culture. HEPES sodium is effective at pH 6.8 to 8.2. HEPES sodium is also a potent inducer of lysosome biogenesis <sup>[1][2][3]</sup> .
In Vitro	HEPES maintains superhydrophilicity of titanium for at least 3 months and resulted in a continuous retention of bioactivity and osteoconductivity <sup>[1]</sup> . HEPES drives lysosome biogenesis, affects MiT/TFE cytoplasmic-nuclear distribution, disrupts global cellular transcriptional profiles, resulting the activation of a MiT/TFE-dependent lysosomal-autophagic gene network in cultured RAW264.7 cells <sup>[3]</sup> .

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

## CUSTOMER VALIDATION

- Int Immunopharmacol. 2023 May 12;120:110292.
- Int Immunopharmacol. September 2022, 108953.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Suzuki T, et al. Nonvolatile buffer coating of titanium to prevent its biological aging and for drug delivery. Biomaterials. 2010;31(18):4818-4828.
- [2]. Sledź P, et al. An experimental charge density of HEPES. Acta Crystallogr B. 2010;66(Pt 4):482-492.
- [3]. <https://pubmed.ncbi.nlm.nih.gov/20631430/>

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA