

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@helloworldbio.com



## DATASHEET

Sodium butyrate

### Product overview

<b>Name</b>	Sodium butyrate
<b>Cat No</b>	HB1399
<b>Alternative names</b>	NaB; SB
<b>Biological action</b>	Inhibitor
<b>Description</b>	HDAC inhibitor. Directs mESC differentiation into hepatocytes.

### Images



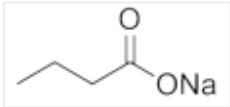
### Biological Data

<b>Biological description</b>	Histone deacetylase (HDAC) inhibitor (IC <sub>50</sub> values are 0.3, 0.3 and 0.4 mM for HDAC1, 7 and 2 respectively). Does not inhibit HDAC6 and HDAC10. Upregulates expression of pluripotency genes in iPSCs and directs mESC differentiation into hepatocytes. Improves cognition and shows anti-Alzheimer's disease and antidepressant actions.
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### Solubility & Handling

<b>Storage instructions</b>	Room temperature
<b>Solubility overview</b>	Soluble in water (100mM)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

<b>Chemical name</b>	Butanoic acid sodium salt
<b>Molecular Weight</b>	110.09
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>4</sub> H <sub>7</sub> NaO <sub>2</sub>
<b>CAS Number</b>	156-54-7
<b>PubChem identifier</b>	5222465

SMILES	[Na+].CCCC([O-])=O
InChi	InChI=1S/C4H8O2.Na/c1-2-3-4(5)6;/h2-3H2,1H3,(H,5,6);/q;+1/p-1
InChiKey	MFBOGIVSZKQAPD-UHFFFAOYSA-M
MDL number	MFC00002816
Appearance	White solid

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## References

### Histone deacetylase is a target of valproic acid-mediated cellular differentiation.

Gurvich N *et al* (2004) *Cancer Res* 64(3)

**PubMedID** [14871841](#)

### Sodium butyrate functions as an antidepressant and improves cognition with enhanced neurotrophic expression in models of maternal deprivation and chronic mild stress.

Valvassori SS *et al* (2014) *Curr Neurovasc Res* 11(4)

**PubMedID** [25233278](#)

### Sodium butyrate efficiently converts fully reprogrammed induced pluripotent stem cells from mouse partially reprogrammed cells.

Kang SJ *et al* (2014) *Cell Reprogram* 16(5)

**PubMedID** [25093667](#)

### Sodium butyrate improves memory function in an Alzheimer's disease mouse model when administered at an advanced stage of disease progression.

Govindarajan N *et al* (2011) *J Alzheimers Dis* 26(1)

**PubMedID** [21593570](#)

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