

## Certificate of Analysis

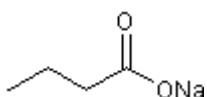
[www.tocris.com](http://www.tocris.com)

**Product Name:** Sodium butyrate  
**CAS Number:** 156-54-7  
**IUPAC Name:** Butanoic acid sodium salt

**Catalog No.:** 3850      **Batch No.:** 1  
**EC Number:** 205-857-6

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>4</sub>H<sub>7</sub>NaO<sub>2</sub>  
**Batch Molecular Weight:** 110.09  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	43.64	6.41	
Found	43.4	6.43	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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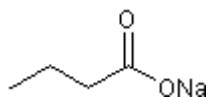
**Description:**

Histone deacetylase inhibitor. Restores contextual memory in a transgenic mouse model of Alzheimer's disease. Shown to induce pancreatic progenitor formation. Directs the differentiation of mouse embryonic stem cells into hepatocytes when used in combination with the cytokine Activin A. Also augments transcription factor stimulated iPSC generation.

**Physical and Chemical Properties:**

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**Storage:** Store at RT

**Solubility & Usage Info:**

water to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

- Boffa et al** (1978) Suppression of histone deacetylation in vivo and in vitro by sodium butyrate. *J.Biol.Chem.* **253** 3364. PMID: 649576.
- Kilgore et al** (2010) Inhibitors of class 1 histone deacetylases reverse contextual deficits in a mouse model of Alzheimer's disease. *Neuropsychopharmacology* **35** 870. PMID: 20010553.
- Ren et al** (2010) Effects of sodium butyrate on the differentiation of pancreatic and hepatic progenitor cells from mouse embryonic stem cells. *J.Cell Biochem.* **109** 236. PMID: 19911386.
- Zhou et al** (2010) Differentiation of mouse embryonic stem cells into hepatocytes induced by a combination of cytokines and sodium butyrate. *J.Cell Biochem.* **109** 606. PMID: 20039312.
- Liang et al** (2010) Butyrate promotes induced pluripotent stem cell generation. *J.Biol.Chem.* **285** 25516. PMID: 20554530.

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**bio-techne.com**  
info@bio-techne.com  
techsupport@bio-techne.com

**North America**  
Tel: (800) 343 7475

**China**  
info.cn@bio-techne.com  
Tel: +86 (21) 52380373

**Europe Middle East Africa**  
Tel: +44 (0)1235 529449

**Rest of World**  
www.tocris.com/distributors  
Tel:+1 612 379 2956