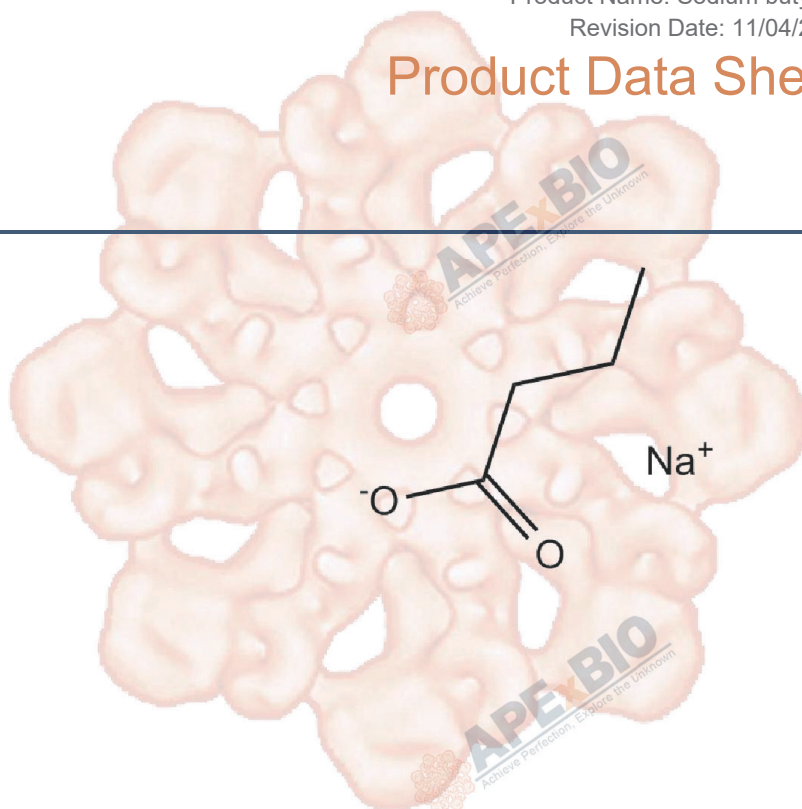


Product Data Sheet

Sodium butyrate

Cat. No.: B1835
CAS No.: 156-54-7
Formula: C₄H₇NaO₂
M.Wt: 110.09
Synonyms:
Target:
Pathway:
Storage: Store at -20°C



Solvent & Solubility

insoluble in DMSO; ≥4 mg/mL in H₂O; ≥5.87 mg/mL in EtOH

In Vitro

Preparing Stock Solutions	Solvent	Mass	1mg	5mg	10mg
		Concentration			
		1 mM	9.0835 mL	45.4174 mL	90.8348 mL
		5 mM	1.8167 mL	9.0835 mL	18.1670 mL
		10 mM	0.9083 mL	4.5417 mL	9.0835 mL

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

Biological Activity

Shortsummary

Histone deacetylase inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: 2 adenoma-derived cell lines (AA/CI and RG/C2)

Preparation method: The solubility of this compound in DMSO is limited. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.

Reacting conditions: 1 ~ 4 mM; 4 days

	Applications:	In RG/C2 cells, Sodium Butyrate at the concentrations of 2 mM and above reduced the attached-cell yield to approximately 50% of the control, and significantly increased the proportion of floating cells. It was demonstrated that the increase in the percentage of floating cells was attributed to the induction of apoptosis and not simply due to increased necrosis. Compared with RG/C2 cells, AA/CI cells were more sensitive to Sodium Butyrate.
In Vivo	Animal experiment	
	Animal models:	An R6/2 transgenic mouse model of Huntington's disease (HD)
	Dosage form:	100, 200, 400, 600, 1200, 5000 and 10,000 mg/kg; i.p.; q.d.
	Applications:	In an R6/2 transgenic mouse model of HD, Sodium Butyrate significantly extended survival in a dose-dependent manner, improved body weight and motor performance, as well as delayed the neuropathological sequelae. Moreover, Sodium Butyrate increased the level of histone and specificity protein-1 acetylation, and protected against 3-nitropropionic acid-induced neurotoxicity.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Deng R, Zhang P, et al. "HDAC is indispensable for IFN- γ -induced B7-H1 expression in gastric cancer." Clin Epigenetics. 2018 Dec 11;10(1):153.PMID:30537988

See more customer validations on www.apexbt.com.

References

- [1]. Hague A1, Manning AM, Hanlon KA, Huschtscha LI, Hart D, Paraskeva C. Sodium butyrate induces apoptosis in human colonic tumour cell lines in a p53-independent pathway: implications for the possible role of dietary fibre in the prevention of large-bowel cancer. Int J Cancer. 1993 Sep 30;55(3):498-505.
- [2]. Ferrante RJ1, Kubilus JK, Lee J, Ryu H, Beesen A, Zucker B, Smith K, Kowall NW, Ratan RR, Luthi-Carter R, Hersch SM. Histone deacetylase inhibition by sodium butyrate chemotherapy ameliorates the neurodegenerative phenotype in Huntington's disease mice. J Neurosci. 2003 Oct 15;23(28):9418-27.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

