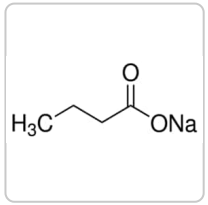

All Photos (4)

Documents

SDS

COO/COA

Specification Sheet

More Documents

B5887 Sigma-Aldrich

Sodium butyrate

≥98.5% (GC)

Synonym(s):
Butyric acid sodium salt

Linear Formula:
$CH_3CH_2CH_2COONa$

CAS Number:	156-54-7	**Molecular Weight:**	110.09
Beilstein:	3629439	**EC Number:**	205-857-6
MDL number:	MFCD00002816	**PubChem Substance ID:**	24891873
NACRES:	NA.25		

SKU	Pack Size	Availability	Price	Quantity
B5887-250MG	250 MG	Available to ship on October 10, 2022 Details...	€67.50	− +
B5887-1G	1 G	Estimated to ship on October 28, 2022	€172.00	− +
B5887-5G	5 G	Estimated to ship on November 01, 2022	€586.00	− +

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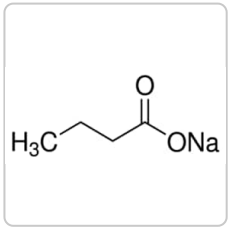
RECOMMENDED PRODUCTS



Sigma-Aldrich

303410

Sodium butyrate

98%

View Price and Availability

Sigma-Aldrich

TR-1008

Sodium Butyrate Solution

This reagent enhances the transient expression of plasmids containing the SV40 early promoter in transfected cells.

View Price and Availability

PROPERTIES

biological source	synthetic (organic)
Quality Level	**200**
assay	≥98.5% (GC)
form	powder
mp	250-253 °C (lit.)
solubility	water: 100 mg/mL, clear to slightly hazy, colorless

storage temp.	room temp
SMILES string	[Na+].CCCC([O-])=O
InChI	1S/C4H8O2.Na/c1-2-3-4(5)6;/h2-3H2,1H3,(H,5,6);/q;+1/p-1
InChI key	MFBOGIVSZKQAPD-UHFFFAOYSA-M
Gene Information	mouse ... **ENSMUSG00000061062(15181)**

Looking for similar products? Visit **Product Comparison Guide**

DESCRIPTION

Application

Sodium butyrate has been used:

- as a component in homogenization and immunoprecipitation buffer for HDAC inhibition in fly embryos and insect s2 cells.
- as histone deacetylase inhibitor in breast cancer cell line MDA-MB-231, analysed by cell viability assay and viral replication assay.
- to enhance the production of recombinant tissue-plasminogen activator (t-PA) in Chinese hamster ovary (CHO) cells in a bioreactor.

Packaging

250 mg in glass bottle

1, 5 g in glass bottle

Biochem/physiol Actions

Sodium butyrate is a short-chain fatty acid that inhibits histone deacetylase (HDAC) in the millimolar range. Decreases Ca^{2+} release from intracellular stores. Induces apoptosis in several cell lines. Sodium butyrate induces the production of recombinant protein in Chinese hamster ovary (CHO) cells and other human cell lines. Sodium butyrate affects the proteome and gene expression pathways in the cells. It represses cell cycle related genes and modifies the genes involved in cell metabolism and apoptosis.

Caution

Hygroscopic

RELATED PRODUCTS

Related Product

EPI003

In Situ Histone Deacetylase (HDAC) Activity Fluorometric Assay Kit, 100 assays in 96 well plates

View Pricing

EPI004

Histone Deacetylase 3 (HDAC3) Activity Assay Kit, 100 assays in 96 well plates

View Pricing

EPI005

Histone Deacetylase 3 (HDAC3) Inhibitor Screening Kit, 100 assays in 96 well plates

View Pricing

EPI006

Histone Deacetylase 8 (HDAC8) Activity Assay Kit, 100 assays in 96 well plates

View Pricing

EPI007

Histone Deacetylase 8 (HDAC8) Inhibitor Screening Kit, 100 assays in 96 well plates

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EPI008

Histone Deacetylase (HDAC) Inhibitor Set I, Set includes 6 inhibitors

View Pricing

EPI009

Histone Deacetylase (HDAC) Inhibitor Set II, Set includes 7 inhibitors

View Pricing

SAFETY INFORMATION

Pictograms

Signal Word
Warning

Hazard Statements
H302 - H315 - H319

Precautionary Statements
P264 - P270 - P280 - P301 + P312 - P302 + P352 - P305 + P351 + P338

GHS07

Hazard Classifications
Acute Tox. 4 Oral - Eye Irrit. 2 - Skin Irrit. 2

Storage Class Code
11 - Combustible Solids

WGK
WGK 1

Flash Point(F)
Not applicable

Flash Point(C)
Not applicable

Personal Protective Equipment
dust mask type N95 (US), Eyeshields, Gloves

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

e.g. 023J5431

How to enter Lot Number (COA)

Search

Certificate of Origin

Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

e.g. 023J5431

How to enter Lot Number (COO)

Search

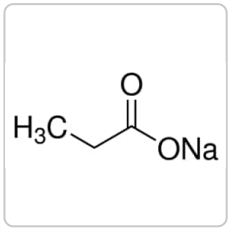
More Documents

Spectra - ATR-IR

Structure Search

SDS

CUSTOMERS ALSO VIEWED



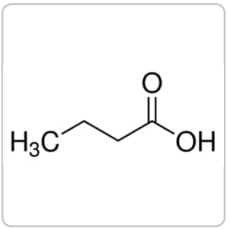
Sigma-Aldrich

P5436

Sodium propionate

≥99.0%, BioReagent, suitable for insect cell culture

View Price and Availability



Sigma-Aldrich

B103500

Butyric acid

≥99%

View Price and Availability

PEER REVIEWED PAPERS

Histone deacetylase inhibitors improve the replication of oncolytic herpes simplex virus in breast cancer cells

Cody JJ, et al.
PLoS ONE, 9(3), e92919-e92919 (2014)

Na-butyrate sustains energetic states of metabolism and t-PA productivity of CHO cells

McMurray-Beaulieu V, et al.
Journal of Bioscience and Bioengineering, 108(2), 160-167 (2009)

Histone deacetylase Rpd3 regulates olfactory projection neuron dendrite targeting via the transcription factor Prospero

Tea JS, et al.
The Journal of Neuroscience, 30(29), 9939-9946 (2010)

Combined negative effect of donor age and time in culture on the reprogramming efficiency into induced pluripotent stem cells.

Ras Trokovic et al.
Stem cell research, 15(1), 254-262 (2015-06-23)

Somatic cells can be reprogrammed into induced pluripotent stem cells (iPSC) by the forced expression of the transcription factors OCT4, SOX2, KLF4 and c-MYC. Pluripotent reprogramming appears as a slow and inefficient process because of genetic and epigenetic barriers of

---

Comprehensive suppression of all apoptosis-induced proliferation pathways as a proposed approach to colorectal cancer prevention and therapy.

Michael Bordonaro et al.
PloS one, 9(12), e115068-e115068 (2014-12-17)

Mutations in the WNT/beta-catenin pathway are present in the majority of all sporadic colorectal cancers (CRCs), and histone deacetylase inhibitors induce apoptosis in CRC cells with such mutations. This apoptosis is counteracted by (1) the signaling heterogeneity of CRC cell

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PROTOCOLS AND ARTICLES

Articles

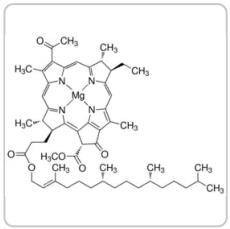
Naive Pluripotent Stem Cell Culture in an Inhibitor Based 2i/LIF Containing Serum-Free and Feeder-Free Stem Cell Media

Naive pluripotent stem cells are located within the epiblast of mature blastocysts. These primitive “ground-state” cells may be cultured in vitro using specialized media and small molecule inhibitors.

Histone Modification and Chromatin Remodeling | Epigenetics

Epigenetic modifications are thought to occur through two key interconnected processes—DNA methylation and the covalent modification of histones.

RECENTLY VIEWED PRODUCTS

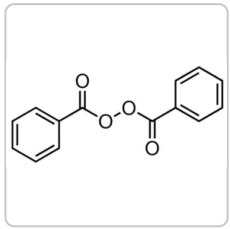


Sigma-Aldrich

B5906

Bacteriochlorophyll from *Rhodopseudomonas sphaeroides*

View Price and Availability



Sigma-Aldrich

B5907

Benzoyl peroxide blend with dicyclohexyl phthalate

suitable for use as a catalyst for electron microscopy. Modified to render it safe in transit.

View Price and Availability

TECHNICAL SERVICE

Our team of scientists has experience in all areas of research including Life Science, Material Science, Chemical Synthesis, Chromatography, Analytical and many others.

Contact Technical Service