


Product datasheet

# Sodium 4-phenylbutyrate, Histone deacetylase inhibitor ab141253

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## Overview

<b>Product name</b>	Sodium 4-phenylbutyrate, Histone deacetylase inhibitor
<b>Description</b>	Histone deacetylase inhibitor
<b>Biological description</b>	Histone deacetylase (HDAC) inhibitor. Able to induce apoptosis, differentiation and promote the maturation of a variety of malignant cells. Inhibits glioma cell proliferation.
<b>Purity</b>	> 99%
<b>CAS Number</b>	1716-12-7
<b>Chemical structure</b>	

## Properties

<b>Chemical name</b>	4-Phenylbutyric acid sodium salt
<b>Molecular weight</b>	186.18
<b>Molecular formula</b>	C <sub>10</sub> H <sub>11</sub> NaO <sub>2</sub>
<b>PubChem identifier</b>	5258
<b>Storage instructions</b>	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
<b>Solubility overview</b>	Soluble in water to 100 mM and in DMSO to 25 mM
<b>Handling</b>	<p>Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.</p> <p>Refer to SDS for further information</p> <p>Need more advice on solubility, usage and handling? Please visit our <a href="#">frequently asked questions (FAQ) page</a> for more details.</p>
<b>SMILES</b>	O=C(CCCc1ccccc1)O[Na]
<b>Source</b>	Synthetic

## Applications

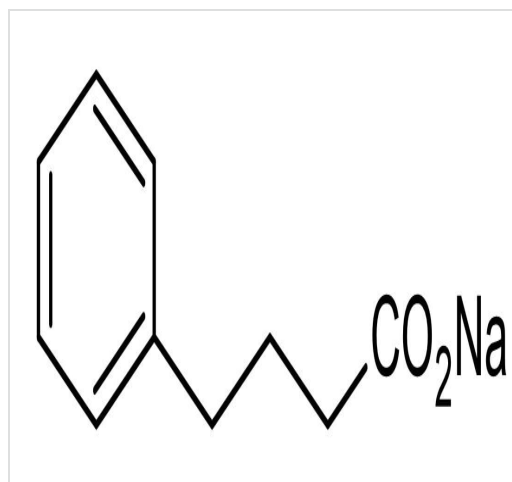
### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab141253 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

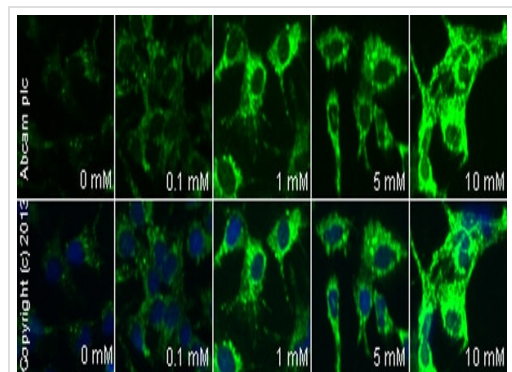
Application	Abreviews	Notes
Functional Studies		Use at an assay dependent concentration.

## Images



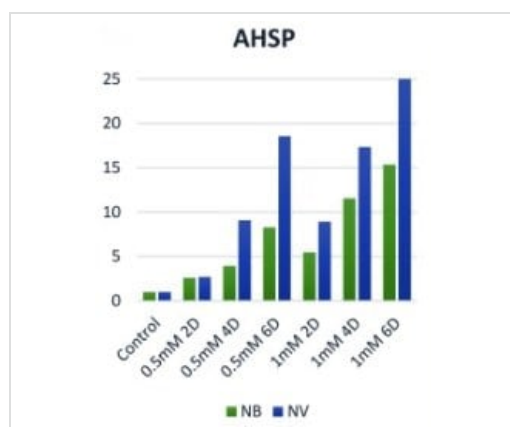
Chemical Structure - Sodium 4-phenylbutyrate,  
Histone deacetylase inhibitor (ab141253)

2D chemical structure image of ab141253, Sodium 4-phenylbutyrate, Histone deacetylase inhibitor



Immunocytochemistry/ Immunofluorescence -  
Sodium 4-phenylbutyrate, Histone deacetylase  
inhibitor (ab141253)

**ab70362** staining adiponectin receptor 1 in HepG2 cells treated with sodium 4-phenylbutyrate (ab141253), by ICC/IF. Increase of adiponectin receptor 1 expression correlates with increased concentration of sodium 4-phenylbutyrate, as described in literature. The cells were incubated at 37°C for 6 hours in media containing different concentrations of ab141253 (sodium 4-phenylbutyrate) in DMSO, fixed with 4% formaldehyde for 10 minutes at room temperature and blocked with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 2h at room temperature. Staining of the treated cells with **ab70362** (5 µg/ml) was performed overnight at 4°C in PBS containing 1% BSA and 0.1% tween. A DyLight 488 anti-rabbit polyclonal antibody (**ab96899**) at 1/250 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI and are shown in blue.



Cellular activation - Sodium 4-phenylbutyrate,

Histone deacetylase inhibitor (ab141253)

Image from Okhovat MA, et al. Plos One, 13(2), e0189267. Fig 1g.; doi: 10.1371/journal.pone.0189267

The effect of sodium phenylbutyrate (NB) and sodium valproate (NV) on the expression of AHSP in K562 cells. 2D, two days of treatment; 4D, four days of treatment; 6D, six days of treatment.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS"

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