Sodium Butyrate Solution (1.0 M)

Contains 110.1 g/L sodium butyrate
in cell/tissue culture grade water
Sterile-filtered
Endotoxin tested
Cell culture tested

Catalog Number **LS 033-01**
Storage Temperature 2~8°C

Product Description
Sodium butyrate is the sodium salt of the short-chain fatty acid butyric acid. Butyrate is a metabolite of intestinal bacteria and a major energy source for gut epithelial cells, and is known to play a key role in the homeostasis of the gastrointestinal tract. A review of the effects of sodium butyrate on cell volume regulation and chloride transport in the rat distal colon has been published. Sodium butyrate is a known inhibitor of histone deacetylases. A study of the enhancement and suppression of various cytokines in stimulated human monocytes using sodium butyrate has been reported. In cultured mouse and human cells, sodium butyrate has been shown to inhibit both the mRNA and protein content of cyclin D1.
LS 033-01 contains 110.1 g/L sodium butyrate in cell/tissue culture grade water (**LS 016-01**).

Storage/Stability
Sodium Butyrate solution should be stored at 2~8°C in the dark. Deterioration of the liquid may be recognized by (1) precipitate or particulate matter throughout the solution, (2) cloudy appearance, (3) color change, and/or (4) pH change. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date.

Molecular Weight
110.1 g/mol

Molecular Formula
$C_4H_7NaO_2$

Precautions
For *In Vitro* Use Only

Product Profile	
Appearance	Clear colorless solution
Endotoxin	≤ 10 EU/ml
Sterility	Sterilized by 0.2 μm filtration system. Sterility tests are performed in accordance with protocols described in USP.

References
Quantitative Chemical Analysis, 4th ed., Kolthoff, I. M., et al., MacMillan Pub. (New York, NY: 1969).
Saemann, M. D., et al., Anti-inflammatory effects of sodium butyrate on human monocytes: potent inhibition of IL-12 and up-regulation of IL-10 production. FASEB J., **14(15)**, 2380-2382 (2000).
Diener, M., and Scharrer, E., Effects of short-chain fatty acids on cell volume regulation and chloride transport in the rat distal colon. Comp. Biochem. Physiol. A Physiol., **118(2)**, 375-379 (1997).
Kruh, J., Effects of sodium butyrate, a new pharmacological agent, on cells in culture. Mol. Cell. Biochem., **42(2)**, 65-82 (1982).
Lallemand, F., et al., Direct inhibition of the expression of cyclin D1 gene by sodium butyrate. Biochem. Biophys. Res. Commun., **229(1)**, 163-169 (1996).

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