

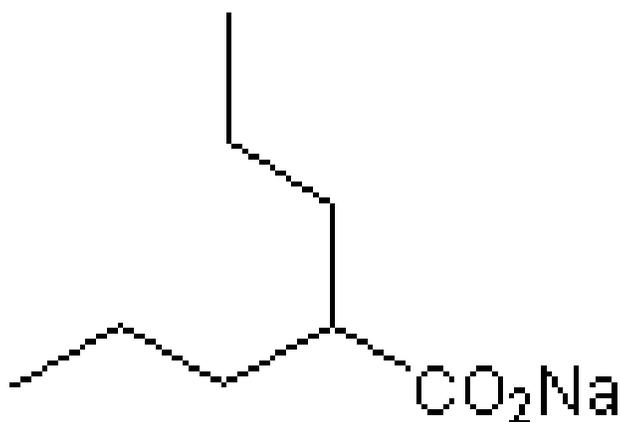
Cat No. 25-B43

## Valproic Acid

5 g

Valproic Acid is a small molecule histone deacetylase (HDAC) inhibitor that exhibits anticancer, anti-inflammatory and neuroprotective effects. It has been shown to inhibit multiple pathways including the ERK, PKC and Wnt/ $\beta$ -Catenin pathways. Valproic Acid has been shown to regulate the differentiation and proliferation of various cell types, including mesenchymal and hematopoietic stem cells, primary neurons, neuroblastomas and neural progenitor cells. Valproic acid, when used in combination with cytokines differentiate cells into a uniform and homogeneous cell population of hepatic progenitor cells, followed by maturation into functional hepatocytes.

### TECHNICAL INFORMATION



**Other Names:** VPA, sodium salt, Sodium Valproate, Sodium 2-propylpentanoate

**Chemical Formula:** C<sub>8</sub>H<sub>16</sub>O<sub>2</sub> · Na

**CAS Number:** 1069-66-5

**Molecular Weight:** 167.2

**Purity:** >98%

**Appearance:** a crystalline solid

**Solubility:** DMSO

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**For research purposes only**

### STORAGE AND HANDLING

**Storage:** Store at 4°C and protected from light. Following reconstitution, store aliquots at -20°C.

**Stability:** Stock solutions stable at -20°C for up to 2 years.

**Shipping Conditions:** Shipped at room temperature.

### PRODUCT USE

Soluble in DMSO. For a 10mM concentrated stock solution, add 3.01 ml of DMSO to the entire contents of the vial. If precipitate is observed, vortex for 5 minutes. For most cells, the maximum tolerance to DMSO is less than 0.5%. This compound is soluble to 100mM in DMSO and to 30mM in water.

### REFERENCES

1. Huangfu et al. (2008) Induction of pluripotent stem cells by defined factors is greatly improved by small-molecule compounds. *Nat Biotechnol.* 26(7):795-7.
2. Jung et al. (2008) Valproic acid induces differentiation and inhibition of proliferation in neural progenitor cells via the beta-catenin-Ras-ERK-p21Cip/WAF1 pathway. *BMC Cell Biol.* 9:66.
3. Dong et al. (2009) Direct hepatic differentiation of mouse embryonic stem cells induced by valproic acid and cytokines. *World J Gastroenterol.* 15(41):5165-75.



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