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# DATASHEET

Valproic acid sodium salt

## Product overview

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| **Name** | Valproic acid sodium salt |
| **Cat No** | HB0867 |
| **Alternative names** | VPA |
| **Biological action** | Inhibitor |
| **Description** | Histone deacetylase inhibitor. Shows multitude of biological actions. Enables pluripotent stem cell induction from somatic cells. |

## Biological Data

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| **Biological description** | Histone deacetylase inhibitor ($IC_{50}$ = 400 µM at HDAC1). Shows multitude of biological actions. Can be used to produce pluripotent stem cells (iPS cells) with only Oct4 and Sox2 factors required in addition. Activates Wnt-dependent gene expression and shows anti-inflammatory, anti-cancer anti-epileptic and neuroprotective actions. Blood-brain barrier permeable. |

## Solubility & Handling

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| **Storage instructions** | room temperature (desiccate) |
| **Solubility overview** | Soluble in water (100mM) or DMSO (50mM) |
| **Important** | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

## Chemical Data

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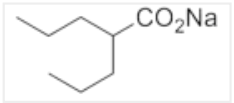
| **Chemical name** | Sodium 2-propylpentanoate |
| **Molecular Weight** | 166.19 |
| **Chemical structure** |  |
| **Molecular Formula** | $C_8H_{15}NaO_2$ |
| **CAS Number** | 1069-66-5 |
| **PubChem identifier** | 16760703 |
| **SMILES** | [Na+].CCCC(CCC)C([O-])=O |
| **InChiKey** | AEQFSUDEHCCHBT-UHFFFAOYSA-M |

## References

**Histone deacetylase is a direct target of valproic acid, a potent anticonvulsant, mood stabilizer, and teratogen.**

Phiel CJ *et al* (2001) J Biol Chem 276(39)
**PubMedID** 11473107

**Valproic acid inhibits Abeta production, neuritic plaque formation, and behavioral deficits in Alzheimer's disease mouse models.**

Qing H *et al* (2008) J Exp Med 205(12)
**PubMedID** 18955571

**Potentiation of anticancer effect of valproic acid, an antiepileptic agent with histone deacetylase inhibitory activity, by the cyclin-dependent kinase inhibitor P276-00 in human non-small-cell lung cancer cell lines.**

Shirsath N *et al* (2013) Lung Cancer 82(2)
**PubMedID** 24051085

**Induction of pluripotent stem cells from primary human fibroblasts with only Oct4 and Sox2.**

Huangfu D *et al* (2008) Nat Biotechnol 26(11)
**PubMedID** 18849973