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# DATASHEET

Tranylcypromine hydrochloride

## Product overview

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| **Name** | Tranylcypromine hydrochloride |
| **Cat No** | HB1412 |
| **Alternative names** | trans-2-phenylcyclopropylamine; 2-PCPA; Parnate |
| **Biological action** | Inhibitor |
| **Purity** | >98% |
| **Description** | LSD1 / MAO inhibitor. Enables reprogramming of mouse embryonic fibroblasts into iPS cells. |

## Biological Data

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| **Biological description** | Lysine-specific demethylase 1 (LSD1) and monoamine oxidase (MAO) inhibitor ($IC_{50}$ = < 2 µM for LSD1). Irreversible inhibition of LSD1, inhibits H3K4 demethylation. Enables reprogramming of mouse embryonic fibroblasts into iPS cells. Shows antidepressant actions. |

## Solubility & Handling

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| **Solubility overview** | Soluble in water (100mM) or DMSO (100mM) |
| **Storage instructions** | room temperature (desiccate) |
| **Storage of solutions** | Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use. |
| **Shipping Conditions** | Stable for ambient temperature shipping. Follow storage instructions on receipt. |
| **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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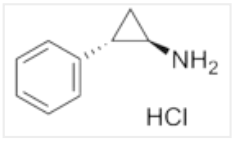
| **Chemical name** | (±)-*trans*-2-Phenylcyclopropylamine hydrochloride |
| **Molecular Weight** | 169.65 |
| **Chemical structure** |  |
| **Molecular Formula** | $C_9H_{11}N.HCl$ |
| **CAS Number** | 1986-47-6 |
| **PubChem identifier** | 2723716 |
| **SMILES** | N[C@H]1[C@H]([C@]2=CC=CC=C2)C1.Cl |
| **InChiKey** | ZPEFMSTTZXJOTM-OULXEKPRSA-N |

## References

**trans-2-Phenylcyclopropylamine is a mechanism-based inactivator of the histone demethylase LSD1.**

Schmidt DM *et al* (2007) Biochemistry 46(14)
**PubMedID** 17367163

**Histone H3 lysine 4 demethylation is a target of nonselective antidepressive medications.**

Lee MG *et al* (2006) Chem Biol 13(6)
**PubMedID** 16793513

**Generation of human-induced pluripotent stem cells in the absence of exogenous Sox2.**

Li W *et al* (2009) Stem Cells 27(12)
**PubMedID** 19839055

**Tranylcypromine: new perspectives on an 'old' drug.**

Frieling H *et al* (2006) Eur Arch Psychiatry Clin Neurosci 256(5)
**PubMedID** 16927039