

# LDE225 (Sonidegib; NVP-LDE225; Erismodegib)

Catalog No: tcsc0904



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

**Size:** 200mg

**Size:** 500mg



## Specifications

**CAS No:**

956697-53-3

**Formula:**

$C_{26}H_{26}F_3N_3O_3$

**Pathway:**

Stem Cell/Wnt

**Target:**

Smo

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

LDE225; NVP-LDE 225

**Observed Molecular Weight:**

485.5

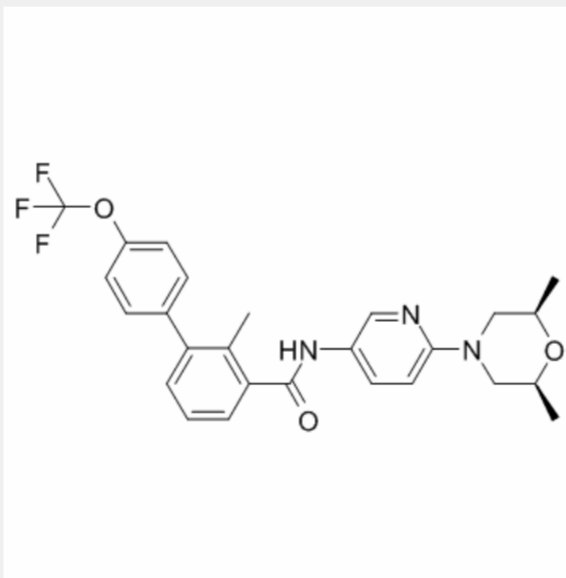
**Product Description**

Erismodegib (LDE225) is a potent and selective **Smoothened (Smo)** antagonist with **IC<sub>50</sub>**s of 1.3 nM and 2.5 nM for mouse and human Smo, respectively.

IC50 & Target: IC50: 1.3 nM (mSmo), 2.5 nM (hSmo)<sup>[1]</sup>

**In Vitro:** The IC<sub>50</sub> values for Erismodegib (NVP-LDE225) for the major human CYP450 drug metabolizing enzymes is greater than 10 μM<sup>[1]</sup>. Erismodegib (LDE225), a small molecule, clinically investigated SMO inhibitor, used alone and in combination with Nilotinib, inhibits the Hh pathway in CD34<sup>+</sup> chronic phase (CP)-chronic myeloid leukaemia (CML) cells, reducing the number and self-renewal capacity of CML leukaemia stem cell (LSC). Erismodegib interacts directly with SMO, in a similar fashion to cyclopamine, to reduce expression of downstream Hh signaling targets. Primary CD34<sup>+</sup> CP-CML cells are cultured in serum free media (SFM)±Erismodegib for 6, 24 and 72 hours (h). At 72 h, while there is variability between the biological samples, *GLI1* is significantly downregulated following exposure to Erismodegib (10 nM; 0.78-fold and 100 nM; 0.73-fold, respectively (p[2]).

**In Vivo:** Erismodegib (NVP-LDE225) is a weak base with a measured pK<sub>a</sub> of 4.2 and exhibits relatively poor aqueous solubility. In the subcutaneous Ptch<sup>+/-</sup>p53<sup>-/-</sup> medulloblastoma allograft mouse model, Erismodegib demonstrates dose-related antitumor activity after 10 days of oral administration of a suspension of the diphosphate salt. At a dose of 5 mg/kg/day qd, Erismodegib significantly inhibits tumor growth, corresponding to a T/C value of 33% (p[1]. Bone marrow cells and spleen cells from a subset of treated mice are transplanted into secondary recipient mice. Transplantation of either bone marrow (BM) or spleen cells from mice treated with Erismodegib+Nilotinib results in reduced white cell count (WCC) and reduces leukaemia development in secondary recipients compared to Erismodegib or Nilotinib alone<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!