Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Linsitinib

Catalog No: tcsc0242

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
867160-71-2

Formula:
$C_{26}H_{23}N_5O$

Pathway:
Protein Tyrosine Kinase/RTK;Protein Tyrosine Kinase/RTK

Target:
IGF-1R;Insulin Receptor

Purity / Grade:
>98%

Solubility:
DMSO : 62.5 mg/mL (148.28 mM; Need ultrasonic)

Alternative Names:
OSI-906

Observed Molecular Weight:
421.49

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Product Description

Linsitinib is a selective inhibitor of **IGF-1R** with **IC_{50}** of 35 nM, and modestly potent to **InsR** with **IC_{50}** of 75 nM, and has no activity towards Abl, ALK, BTK, EGFR, FGFR1/2, PKA etc.

IC50 & Target: IC50: 35 nM (IGF-1R), 75 nM (InsR)

In Vitro: Linsitinib inhibits IGF-1R autophosphorylation and activation of the downstream signaling proteins Akt, ERK1/2 and S6 kinase with IC_{50} of 0.028 to 0.13 μM. Linsitinib enables an intermediate conformation of the target protein through interactions with the C-helix. Linsitinib displays favorable metabolic stability in liver microsomes. Linsitinib fully inhibits both IR and IGF-1R phosphorylation at a concentration of 1 μM. Linsitinib inhibits proliferation of several tumor cell lines including non-small-cell lung cancer and colorectal cancer (CRC) tumor cell line with EC_{50} of 0.021 to 0.810 μM[1].

In Vivo: Linsitinib inhibits tumor growth in an IGF-1R-driven xenograft mouse model, with 100% TGI and 55% regression at a dose of 75 mg/kg and 60% TGI and no regression at a dose of 25 mg/kg. Linsitinib administration induces different elimination half-lives of itself in dog, rat and mice, the elimination half-lives are 1.18 hours, 2.64 hours and 2.14 hours, respectively. Linsitinib administration at different single dose once-daily in femal Sprague-Dawley rat and femal CD-1 mouse reveal that the Vmax is not dose-proportional to Linsitinib dose. Linsitinib elevates the blood glucose levels at a dose of 25 mg/kg after 12 days administration. Linsitinib administration at a single dose of 75 mg/kg in IGF-1R-driven full-length human IGF-1R (LISN) xenograft mouse model achieve maximal inhibition of IGF-1R phosphorylation (80%) between 4 and 24 hours with plasma drug concentrations of 26.6-4.77 μM[1] . Linsitinib administered as a single dose of at 60 mg/kg in NCI-H292 xenografts mice inhibits uptake of glucose at 2, 4, and 24 hours post-treatment in vivo. Linsitinib inhibits the growth of tumors in NCI-H292 xenograft mouse model[2].