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# 产品名称：ETP-46321
# 产品别名：ETP-46321

## 生物活性：

**Description**

ETP-46321 is a potent and orally bioavailable PI3Kα and PI3Kδ inhibitor with $K_{iapp}$s of 2.3 and 14.2 nM, respectively.

**$IC_{50}$ & Target**

| p110α | PI3Kα-E545K | PI3Kα-E542K | PI3Kα-H1047R | p110δ |
|---|---|---|---|---|
| 2.3 nM (Ki) | 1.77 nM (Ki) | 1.89 nM (Ki) | 2.33 nM (Ki) | 14.2 nM (Ki) |
| p110β | p110γ | | | |
| 170 nM (Ki) | 179 nM (Ki) | | | |

**In Vitro**

ETP-46321 is selected to be screened against other PI3K isoforms. ETP-46321 is more potent against isoform α ($K_{iapp}$=2.3 nM). ETP-4632, has been profiled and shown to be a potent PI3K α and δ inhibitor, highly selective versus mTOR and 288 representative kinases. ETP-46321 is also tested against three of the p110α mutant enzymes detected in human cancers (E542K, E545K and H1047R), being equipotent against these mutants when compared to the wild type protein ($K_{iapp}$=2.33, 1.77 and 1.89 nM for PI3Kα-H1047R, PI3Kα-E545K and PI3Kα-E542K, respectively). ETP-46321 inhibits the phosphorilation of AKT in U2OS cell line with an $IC_{50}$ of 8.3 nM[1].

**In Vivo**

ETP-46321, is selected for in vivo studies based on its appealing pharmacokinetic profile in BALB-C mice, low in vivo Clearance (0.6 L/h/Kg) and good oral bioavailability (90%). ETP-46321 demonstrates a good pharmacokinetic profile in mice and is selected for preliminary in vivo evaluation in a lung tumor mouse model driven by a K-RasG12V oncogenic mutation, showing significant tumor growth inhibition, and reduction of the tumor metabolic activity as measured by positron emission tomography (PET) techniques[1].

**Solvent&Solubility**

***In Vitro:***

**DMSO : ≥ 33 mg/mL (69.69 mM)**

* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.1117 mL | 10.5585 mL | 21.1171 mL |
| 5 mM | 0.4223 mL | 2.1117 mL | 4.2234 mL |
| 10 mM | 0.2112 mL | 1.0559 mL | 2.1117 mL |

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

**References**

[1]. Martínez González S, et al. Identification of ETP-46321, a potent and orally bioavailable PI3K α, δ inhibitor. Bioorg Med Chem Lett. 2012 May 15;22(10):3460-6.

## 实验参考：

| | |
|---|---|
| | Mice[1] |

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|---|---|
| **Animal Administration** | BALB/C mice are treated daily with ETP-46321 (50 mg/kg, p.o.) for three weeks. Tumor volumes of four mice in each treatment group are measured and compared to the starting volume at the beginning of the treatment. |
| **References** | [1]. Martínez González S, et al. Identification of ETP-46321, a potent and orally bioavailable PI3K α, δ inhibitor. Bioorg Med Chem Lett. 2012 May 15;22(10):3460-6. |