Product Data Sheet

Picropodophyllin-d₆

Cat. No.: HY-15494S1 Molecular Formula: $C_{22}H_{16}D_6O_8$ Molecular Weight: 420.44

Target: Apoptosis; IGF-1R; Isotope-Labeled Compounds

Pathway: Apoptosis; Protein Tyrosine Kinase/RTK; Others

Storage: Please store the product under the recommended conditions in the Certificate of

Analysis.

BIOLOGICAL ACTIVITY

Description	Picropodophyllin-d ₆ (AXL1717-d ₆) is deuterium labeled Picropodophyllin. Picropodophyllin (AXL1717) is a selective insulin-like growth factor-1 receptor (IGF-1R) inhibitor with an IC50 of 1 nM.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.
- [2]. Bieghs L, et al. The IGF-1 receptor inhibitor picropodophyllin potentiates the anti-myeloma activity of a BH3-mimetic. Oncotarget. 2014 Nov 30;5(22):11193-208.
- [3]. Girnita A, et al. Cyclolignans as inhibitors of the insulin-like growth factor-1 receptor and malignant cell growth. Cancer Res. 2004 Jan 1;64(1):236-42.
- [4]. Kong YL, et al. Insulin deficiency induces rat renal mesangial cell dysfunction via activation of IGF-1/IGF-1R pathway. Acta Pharmacol Sin. 2016 Feb;37(2):217-27.
- [5]. Menu E, et al. Inhibiting the IGF-1 receptor tyrosine kinase with the cyclolignan PPP: an in vitro and in vivo study in the 5T33MM mouse model. Blood. 2006 Jan 15;107(2):655-60. Epub 2005 Jul 26.
- [6]. Stromberg T, et al. IGF-1 receptor tyrosine kinase inhibition by the cyclolignan PPP induces G2/M-phase accumulation and apoptosis in multiple myeloma cells. Blood. 2006 Jan 15;107(2):669-78. Epub 2005 Sep 15.
- [7]. Tomizawa M, et al. Picropodophyllin and sorafenib synergistically suppress the proliferation and motility of hepatocellular carcinoma cells. Oncol Lett. 2014 Nov;8(5):2023-2026. Epub 2014 Aug 27.

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$

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