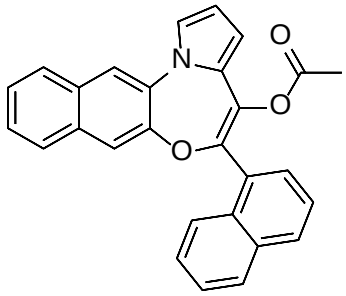
Product data sheet

MedKoo Cat#: 406743 Name: PBOX-15 CAS: 354759-10-7 Chemical Formula: $C_{28}H_{19}NO_3$ Exact Mass: 417.1365 Molecular Weight: 417.464	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
PBOX-15 is a novel microtubule targeting agent, induces apoptosis, upregulates death receptors, and potentiates TRAIL-mediated apoptosis in multiple myeloma cells. PBOX-15 inhibits T-cell migration via post-translational modifications of tubulin. PBOX-15 induces apoptosis, upregulates death receptors, and potentiates TRAIL-mediated apoptosis in multiple myeloma cells. PBOX-15 induces apoptosis and improves the efficacy of oxaliplatin in human colorectal cancer cell lines.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.40 mL	11.98 mL	23.95 mL
5 mM	0.48 mL	2.40 mL	4.79 mL
10 mM	0.24 mL	1.20 mL	2.40 mL
50 mM	0.05 mL	0.24 mL	0.48 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Nathwani SM, Greene LM, Butini S, Campiani G, Williams DC, Samali A, Szegezdi E, Zisterer DM. The pyrrolo-1,5-benzoxazepine, PBOX-15, enhances TRAIL-induced apoptosis by upregulation of DR5 and downregulation of core cell survival proteins in acute lymphoblastic leukaemia cells. Int J Oncol. 2016 Jul;49(1):74-88. doi: 10.3892/ijo.2016.3518. Epub 2016 May 12. PMID: 27176505; PMCID: PMC4902072.
2. Kinsella P, Greene LM, Bright SA, Pollock JK, Butini S, Campiani G, Bauer S, Williams DC, Zisterer DM. The novel pyrrolo-1,5-benzoxazepine, PBOX-15, synergistically enhances the apoptotic efficacy of imatinib in gastrointestinal stromal tumours; suggested mechanism of action of PBOX-15. Invest New Drugs. 2016 Apr;34(2):159-67. doi: 10.1007/s10637-016-0331-1. Epub 2016 Feb 17. PMID: 26885657.

In vivo study
TBD

7. Bioactivity
Biological target:
PBOX-15 is a novel microtubule targeting agent.

Product data sheet

In vitro activity

PBOX-15 enhanced TRAIL-induced apoptosis by dual activation of extrinsic and intrinsic apoptotic pathways. The specific caspase-8 inhibitor, Z-IETD-FMK, identified the extrinsic pathway as the principal mode of apoptosis. This study demonstrates that PBOX-15 can enhance TRAIL-induced apoptosis by upregulation of DR5, reduction of cellular mitochondrial potential, activation of the caspase cascade and downregulation of PI3K/Akt, c-FLIP, Mcl-1 and IAP survival pathways.

Reference: Int J Oncol. 2016 Jul;49(1):74-88. https://pubmed.ncbi.nlm.nih.gov/27176505/

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.