

# Product data sheet



MedKoo Cat#: 401562 Name: NVP-BEP800 CAS: 847559-80-2 Chemical Formula: C <sub>21</sub> H <sub>23</sub> Cl <sub>2</sub> N <sub>5</sub> O <sub>2</sub> S Exact Mass: 479.0950 Molecular Weight: 480.4106		
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:

NVP-BEP800, also known as BEP-800, is a novel, fully synthetic, orally bioavailable inhibitor that binds to the NH(2)-terminal ATP-binding pocket of Hsp90. NVP-BEP800 showed activity against a panel of human tumor cell lines and primary human xenografts in vitro at nanomolar concentrations. In A375 melanoma and BT-474 breast cancer cell lines, NVP-BEP800 induced client protein degradation (including ErbB2, B-Raf(V600E), Raf-1, and Akt) and Hsp70 induction.

## 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
DMF	12.0	24.98
DMF:PBS (pH 7.2) (1:1)	0.5	1.04
DMSO	6.2	12.91
Ethanol	15.0	31.22

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.08 mL	10.41 mL	20.82 mL
5 mM	0.42 mL	2.08 mL	4.16 mL
10 mM	0.21 mL	1.04 mL	2.08 mL
50 mM	0.04 mL	0.21 mL	0.42 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. Meng J, Chen S, Lei YY, Han JX, Zhong WL, Wang XR, Liu YR, Gao WF, Zhang Q, Tan Q, Liu HJ, Zhou HG, Sun T, Yang C. Hsp90 $\beta$  promotes aggressive vasculogenic mimicry via epithelial-mesenchymal transition in hepatocellular carcinoma. *Oncogene*. 2019 Jan;38(2):228-243. doi: 10.1038/s41388-018-0428-4. Epub 2018 Aug 7. PMID: 30087438.
2. Wu J, Wang W, Shao Q, Xiao G, Cheng J, Yuan Y, Zhang M. Irradiation facilitates the inhibitory effect of the heat shock protein 90 inhibitor NVP-BEP800 on the proliferation of malignant glioblastoma cells through attenuation of the upregulation of heat shock protein 70. *Exp Ther Med*. 2014 Sep;8(3):893-898. doi: 10.3892/etm.2014.1800. Epub 2014 Jun 23. PMID: 25120620; PMCID: PMC4113540.

### In vivo study

1. Mshaik R, Simonet J, Georgievski A, Jamal L, Bechoua S, Ballerini P, Bellaye PS, Mlamlam Z, Pais de Barros JP, Geissler A, Francin PJ, Girodon F, Garrido C, Quéré R. HSP90 inhibitor NVP-BEP800 affects stability of SRC kinases and growth of T-cell and

# Product data sheet



B-cell acute lymphoblastic leukemias. Blood Cancer J. 2021 Mar 18;11(3):61. doi: 10.1038/s41408-021-00450-2. PMID: 33737511; PMCID: PMC7973815.

2. Massey AJ, Schoepfer J, Brough PA, Brueggen J, Chène P, Drysdale MJ, Pfaar U, Radimerski T, Ruetz S, Schweitzer A, Wood M, Garcia-Echeverria C, Jensen MR. Preclinical antitumor activity of the orally available heat shock protein 90 inhibitor NVP-BEP800. Mol Cancer Ther. 2010 Apr;9(4):906-19. doi: 10.1158/1535-7163.MCT-10-0055. Epub 2010 Apr 6. PMID: 20371713.

## 7. Bioactivity

Biological target:

---

VER-82576 (NVP-BEP800) is a potent, orally available and selective Hsp90 inhibitor.

### In vitro activity

---

The combined treatment with NVP-BEP800 and X-ray irradiation resulted in the synergistic destruction of malignant cells. Furthermore, NVP-BEP800 significantly induced apoptosis in the human glioblastoma cells. The immunoblot analysis data indicated that NVP-BEP800 markedly reduced the expression level of IKK $\beta$ . The results also revealed that X-ray irradiation significantly attenuated the increase in the level of Hsp70 in cells treated with NVP-BEP800.

Reference: Exp Ther Med. 2014 Sep;8(3):893-898. <https://pubmed.ncbi.nlm.nih.gov/25120620/>

### In vivo activity

---

Oral administration of NVP-BEP800 was well tolerated and induced robust antitumor responses in tumor xenograft models, including regression in the BT-474 breast cancer model. In these tumor models, NVP-BEP800 modulated Hsp90 client proteins and downstream signaling pathways at doses causing antitumor activity. NVP-BEP800 showed in vivo activity in a variety of dosing regimens covering daily to weekly schedules, potentially providing a high degree of flexibility in dose and schedule within the clinical setting.

Reference: Mol Cancer Ther. 2010 Apr;9(4):906-19. <https://pubmed.ncbi.nlm.nih.gov/20371713/>

*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.*