Product data sheet



MedKoo Cat#: 571062				
Name: NSC697923				
CAS: 343351-67-7				
Chemical Formula: C ₁₁ H ₉ NO ₅ S				
Exact Mass: 267.0201				
Molecular Weight: 267.255				
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.			
Molecular Weight: 267. Product supplied as: Purity (by HPLC): Shipping conditions Storage conditions:	255 Powder ≥ 98% Ambient temperature Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.			



1. Product description:

NSC697923 is a ubiquitin-conjugating enzyme E2 (UBE2) inhibitor. It impedes the formation of the Ubc13 and ubiquitin thioester conjugate and suppresses constitutive NF- κ B activity in ABC-DLBCL cells. Importantly, NSC697923 inhibits the proliferation and survival of Diffuse Large B-cell Lymphoma cells and has the ability to induce apoptosis. It can also induce nuclear accumulation of p53, which led to its increased transcriptional activity and tumor suppressor function.

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
DMSO	93.24	348.89

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.74 mL	18.71 mL	37.42 mL
5 mM	0.75 mL	3.74 mL	7.48 mL
10 mM	0.37 mL	1.87 mL	3.74 mL
50 mM	0.08 mL	0.37 mL	0.75 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. Monda JK, Cheeseman IM. Dynamic regulation of dynein localization revealed by small molecule inhibitors of ubiquitination enzymes. Open Biol. 2018 Sep 26;8(9):180095. doi: 10.1098/rsob.180095. PMID: 30257893; PMCID: PMC6170511.

2. Pulvino M, Liang Y, Oleksyn D, DeRan M, Van Pelt E, Shapiro J, Sanz I, Chen L, Zhao J. Inhibition of proliferation and survival of diffuse large B-cell lymphoma cells by a small-molecule inhibitor of the ubiquitin-conjugating enzyme Ubc13-Uev1A. Blood. 2012 Aug 23;120(8):1668-77. doi: 10.1182/blood-2012-02-406074. Epub 2012 Jul 12. PMID: 22791293; PMCID: PMC3429308.

In vivo study

1. Cao DY, Zhang ZH, Li RZ, Shi XK, Xi RY, Zhang GL, Li F, Wang F. A small molecule inhibitor of caspase-1 inhibits NLRP3 inflammasome activation and pyroptosis to alleviate gouty inflammation. Immunol Lett. 2022 Apr;244:28-39. doi: 10.1016/j.imlet.2022.03.003. Epub 2022 Mar 11. PMID: 35288207.

2. Cheng J, Fan YH, Xu X, Zhang H, Dou J, Tang Y, Zhong X, Rojas Y, Yu Y, Zhao Y, Vasudevan SA, Zhang H, Nuchtern JG, Kim ES, Chen X, Lu F, Yang J. A small-molecule inhibitor of UBE2N induces neuroblastoma cell death via activation of p53 and JNK pathways. Cell Death Dis. 2014 Feb 20;5(2):e1079. doi: 10.1038/cddis.2014.54. PMID: 24556694; PMCID: PMC3944268.

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7. Bioactivity

Biological target:

NSC697923 is a potent UBE2N (ubiquitin-conjugating enzyme E2 N, Ubc13) inhibitor.

In vitro activity

NSC697923 impedes the formation of the Ubc13 and ubiquitin thioester conjugate and suppresses constitutive NF-κB activity in ABC-DLBCL cells. Importantly, NSC697923 inhibits the proliferation and survival of ABC-DLBCL cells and GCB-DLBCL cells, suggesting the Ubc13-Uev1A may be crucial for DLBCL growth.

Reference: Blood. 2012 Aug 23;120(8):1668-77. https://pubmed.ncbi.nlm.nih.gov/22791293/

In vivo activity

Given the potent cytotoxic effect of NSC697923 on NB cells in vitro, this study proceeded to evaluate its efficacy on inhibiting NB tumor growth in an orthotopic NB mouse model. Two cell lines SH-SY5Y and NGP with stable luciferase gene expression were used in this set of in vivo experiments. At the end of NSC697923 treatment, the xenograft tumors from both control and treatment groups were harvested and weighed. As expected, this study observed significant tumor regression in NSC697923 treatment group of both SH-SY5Y and NGP xenografts (Figures 6a and b). The response of NB xenografts to NSC697923 demonstrates its potent antitumor efficacy as a single agent in vivo.

Reference: Cell Death Dis. 2014 Feb 20;5(2):e1079. https://pubmed.ncbi.nlm.nih.gov/24556694/

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.