

#10473 Store at -20°C**NSC-697923**

5 mg

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.**Background**

NSC-697923 is a small-molecule inhibitor of the E2 ubiquitin-conjugating enzyme Ubc13-Uev1A. NSC-697923 blocked formation of Ubc13 and ubiquitin thioester conjugates, and suppressed constitutive NF-κB activity in diffuse large B cell lymphoma cells. Inhibition of ubiquitin-dependent DNA damage signaling was observed, but not formation of the phosphorylated form of histone variant H2AX, which is consistent with NSC-697923 targeting of nuclear Ubc13 (1). Additional data suggested that NSC-697923 interacted with the Ubc13 active site cysteine (2). UBE2N (Ubc13) is an E2 ubiquitin-conjugating enzyme that catalyzes K63-linked poly-Ub chain formation. UBE2N forms a heterodimer with MMS2 or Uev1A to exert its E2 ligase function (3). NSC-697923 treatment of neuroblastoma cells increased apoptosis and nuclear p53 accumulation, and enhanced tumor suppression (4). NSC-697923 also inhibited caspase-1 enzymatic activity ($IC_{50} = 1.737 \mu\text{M}$) and NLRP3 protein expression by suppressing the NF-κB signaling pathway. NSC-697923 inhibited joint swelling and NLRP3 inflammasome activation in an animal model of gouty arthritis (5).

Molecular FormulaC₁₁H₉NO₅S**Molecular Weight**

267.3 g/mol

Purity

>98%

CAS

343351-67-7

Solubility

Soluble in DMSO at 25 mg/mL or ethanol at 5 mg/mL.

Storage

Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 1 month to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use:

NSC-697923 is supplied as a lyophilized powder. For a 10 mM stock, reconstitute 1 mg of powder in 0.37 mL of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Pulvino, M. et al. (2012) *Blood* 120, 1668-77.
2. Hodge, C.D. et al. (2015) *ACS Chem Biol* 10, 1718-28.
3. Herrmann, J. et al. (2007) *Circ Res* 100, 1276-91.
4. Cheng, J. et al. (2014) *Cell Death Dis* 5, e1079.
5. Cao, D.Y. et al. (2022) *Immunol Lett* 244, 28-39.

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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