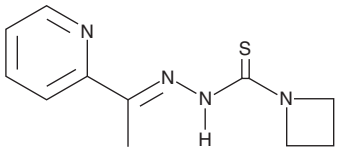
PRODUCT INFORMATION

NSC 319726

Item No. 23701

CAS Registry No.:	71555-25-4
Formal Name:	2-[1-(2-pyridinyl)ethylidene] hydrazide, 1-azetidinecarbothioic acid
MF:	$C_{11}H_{14}N_4S$
FW:	234.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 217, 309 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NSC 319726 is supplied as a crystalline solid. A stock solution may be made by dissolving the NSC 319726 in the solvent of choice, which should be purged with an inert gas. NSC 319726 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of NSC 319726 in these solvents is approximately 14 and 16 mg/ml, respectively.

NSC 319726 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NSC 319726 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. NSC 319726 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NSC 319726 is a reactivator of $p53^{R175}$, a p53 conformational mutant that cannot bind DNA.[1] It selectively inhibits growth of human tumor cell lines containing mutant p53 over those containing wild-type p53 (IC_{50}s = 0.1-1 and >10 µM, respectively). NSC 319726 induces apoptosis in TOV112D ($p53^{R175H}$), but not OVCAR3 ($p53^{R248W}$) or SKOV3 ($p53^{-/-}$), cells at a concentration of 1 µM. It restores a wild-type conformation to human $p53^{175}$ and mouse $p53^{R172}$ mutant proteins and induces expression of p53 target genes in TOV112D cells. *In vivo*, NSC 319726 (1 mg/kg) inhibits tumor growth in TOV112D, but not H460 ($p53^{+/+}$), mouse xenograft model. NSC 319726 also has broad-spectrum antifungal activity (MIC_{50}s = 0.1-2 µg/ml against a panel of pathogenic fungi) with >800-fold selectivity for fungi over human HUH-7 and HepG2 cells.[2]

References

1. Yu, X., Vazquez, A., Levine, A.J., *et al*. Allele-specific p53 mutant reactivation. *Cancer Cell* **21(5)**, 614-625 (2012).
2. Sun, N., Li, D., Zhang, Y., *et al*. Repurposing an inhibitor of ribosomal biogenesis with broad anti-fungal activity. *Sci. Rep*. **7(1)**, 17014 (2017).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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