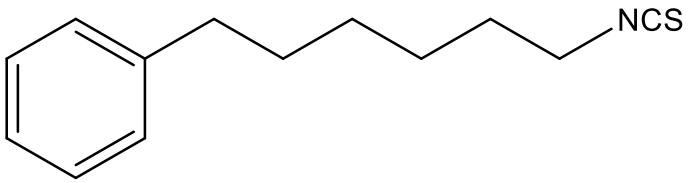
Catalog # 10-5258
Phenylhexyl isothiocyanate
CAS# 133920-06-6
6-Isothiocyanatohexylbenzene; PHITC; PHI
Lot # X109215



Isothiocyanate constituents of cruciferous vegetables are potent chemopreventive agents for carcinogen-induced cancers in rodents.[1] PHITC was the most potent in a series of synthetic arylalkyl isothiocyanates at inhibition of tumorigenicity by NNK, a tobacco-derived nitrosamine, in a mouse model.[2] It was also found to induce apoptosis and inhibit leukemia cell growth *in vivo*[3] and was shown to have dual function as a histone deacetylase inhibitor and hypomethylating agent[4]. PHITC was also shown to restore the activity of mutant p53 and reactivate the p53 pathway in human myeloid leukemia M2 cells.[5]

1) Srivastava *et al*. (2003), *Allyl isothiocyanate, a constituent of cruciferous vegetables, inhibits growth of PC-3 human prostate cancer xenografts in vivo*; Carcinogenesis, **24** 1665
2) Morse *et al*. (1991), *Structure-activity relationships for inhibition of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone lung tumorigenesis by arylalkyl isothiocyanates in A/J mice*; Cancer Res., **51** 1846
3) Lu *et al*. (2006), *The phenylhexyl isothiocyanate induces apoptosis and inhibits leukemia cell growth in vivo*; Oncol. Rep., **16** 1363
4) Lu *et al*. (2008), *Phenylhexyl isothiocyanate has dual function as histone deacetylase inhibitor and hypomethylating agent and can inhibit myeloma cell growth by targeting critical pathways*; J. Haematol. Oncol., **1** 6
5) Zou *et al*. (2019), *Phenylhexyl isothiocyanate suppresses cell proliferation and promotes apoptosis via repairing mutant P53 in human myeloid leukemia M2 cells;* Oncol. Lett., **18** 3358

PHYSICAL DATA

Molecular Weight:	219.35
Molecular Formula:	$C_{13}H_{17}NS$
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (25 mg/ml)
Physical Description:	Colorless to pale yellow liquid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 2 months.

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