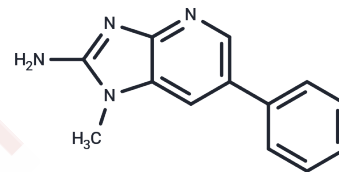


PhIP

Chemical Properties

CAS No. :	105650-23-5
Formula:	C ₁₃ H ₁₂ N ₄
Molecular Weight:	224.26
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	PhIP is a heterocyclic aromatic amine (HAA) from cooked meat. It belongs to pyridine heterocyclic amine and is a 2B carcinogen with estrogen activity. PhIP forms adducts with DNA that promote cancer.
Targets(IC50)	Others
In vitro	PhIP exerts extensive impacts through the activation of estrogen receptor alpha (ER α), leading to significant and overlapping alterations in miRNA expression. This deregulation of miRNA by PhIP may serve as a critical non-DNA-damaging carcinogenic pathway in breast cancer.
In vivo	PhIP forms DNA adducts in the prostate, PhIP also induces oxidative stress, atrophy of the acini, and inflammation of the prostate of rodents. PhIP causes inflammation, epithelial cell damage, and prostatic intraepithelial neoplasia in the dorsolateral prostate lobe compared to the ventral lobe in hCYP1A-mice.[1]

Solubility Information

Solubility	DMSO: 22.5 mg/mL (100.33 mM), Sonication and heating to 60°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.4591 mL	22.2955 mL	44.5911 mL
5 mM	0.8918 mL	4.4591 mL	8.9182 mL
10 mM	0.4459 mL	2.2296 mL	4.4591 mL
50 mM	0.0892 mL	0.4459 mL	0.8918 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Bellamri M, et al. Metabolic Activation of the Cooked Meat Carcinogen 2-Amino-1-Methyl-6-Phenylimidazo[4,5-b]Pyridine in Human Prostate. *Toxicol Sci.* 2018;163(2):543-556.

Papaioannou MD, et al. The cooked meat-derived mammary carcinogen 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP) elicits estrogenic-like microRNA responses in breast cancer cells. *Toxicol Lett.* 2014;229(1):9-16.

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