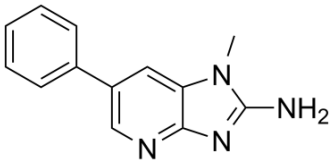
PhIP

Cat. No.:	HY-118716
CAS No.:	105650-23-5
Molecular Formula:	$C_{13}H_{12}N_4$
Molecular Weight:	224.26
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PhIP is the most abundant of generation of heterocyclic amines (HCA), resulted in the cooking of meat[1][2]. DNA damaging and mutagenic activities. PhIP also has oestrogenic activity that could contribute to its tissue specific carcinogenicity[2].
In Vitro	PhIP causes widespread and largely over-lapping effects on miRNA expression. PhIP induces widespread effects via activation of oestrogen receptor alpha (ERα). Deregulation of miRNA by PhIP could potentially be an important non-DNA-damaging carcinogenic mechanism in breast cancer[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In hCYP1A-mice, PhIP induces inflammation, epithelial cell damage, and prostatic intraepithelial neoplasia in the dorsolateral prostate lobe compared to the ventral lobe. PhIP forms DNA adducts in the prostate, PhIP also induces oxidative stress, atrophy of the acini, and inflammation of the prostate of rodents[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. 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 Jun 1;163(2):543-556.

[2]. Papaioannou MD, et ak. 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 Aug 17;229(1):9-16.

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