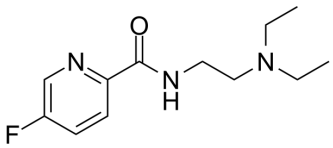
Melanin probe-1

Cat. No.:	HY-136404
CAS No.:	1420844-62-7
Molecular Formula:	$C_{12}H_{18}FN_3O$
Molecular Weight:	239.29
Target:	Others
Pathway:	Others

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (1044.76 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.1790 mL	20.8951 mL	41.7903 mL
	5 mM	0.8358 mL	4.1790 mL	8.3581 mL
	10 mM	0.4179 mL	2.0895 mL	4.1790 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 6.25 mg/mL (26.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 6.25 mg/mL (26.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Melanin probe-1 is an ^{18}F-picolinamides based PET probe. Melanin probe-1 can be used for PET imaging of malignant melanoma. Melanin probe-1 exhibits high tumor targeting efficiency, excellent tumor imaging contrasts, desirable biodistribution patterns, and good in vivo stability[1].

In Vivo

Melanin probe-1 (3.7 MBq; tail vein) exhibits high tumor targeting efficiency[1].
Melanin probe-1 shows high in vivo stability and favorable pharmacokinetic properties such as fast clearance from urinal system and almost background level of uptakes for all of the major organs at 2 h. The high selectivity and specificity of Melanin probe-1, as evidenced by the high tumor-to-non tumor ratios, highlight that Melanin probe-1 PET has high potential to improve the melanoma detection[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mice bearing B16F10 murine melanomas[1]
Dosage:	3.7 MBq (100 μCi)
Administration:	Tail vein
Result:	The tumor uptakes of Melanin probe-1 were 12.74 ± 1.70, 16.61 ± 2.60, and 16.87 ± 1.23 %ID/g at 0.5, 1, and 2 h, respectively.

REFERENCES

[1]. Liu H, et al. Development of 18F-labeled picolinamide probes for PET imaging of malignant melanoma. J Med Chem. 2013;56(3):895-901.

Caution: Product has not been fully validated for medical applications. For research use only.

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