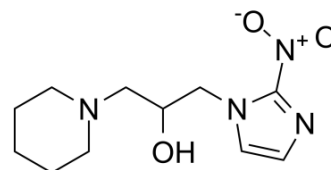


## Pimonidazole

Cat. No.:	HY-105129A		
CAS No.:	70132-50-2		
Molecular Formula:	C <sub>11</sub> H <sub>18</sub> N <sub>4</sub> O <sub>3</sub>		
Molecular Weight:	254.29		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 1 mg/mL (3.93 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	3.9325 mL	19.6626 mL	39.3252 mL
5 mM	---	---	---
10 mM	---	---	---

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

### BIOLOGICAL ACTIVITY

#### Description

Pimonidazole is a novel hypoxia marker for complementary study of tumor hypoxia and cell proliferation in tumor<sup>[1]</sup>. Pimonidazole accumulates in hypoxic cells via covalent binding with macromolecules or by forming reductive metabolites after reduction of its nitro group, it can be used for qualitative and quantitative assessment of tumor hypoxia<sup>[2]</sup>.

#### In Vitro

Pimonidazole, the exogenous hypoxia marker, is a 2-nitroimidazole compound, which forms covalent bonds with cellular macromolecules at oxygen levels below 1.3%.  
 Detection: Hypoxic cells were recognized by immunohistochemical detection of pimonidazole using a mouse monoclonal antibody. Cell proliferation was detected with a commercially available monoclonal antibody for proliferating cell nuclear antigen (PCNA). Assessment of hypoxia and cell proliferation was made qualitatively with light microscopy and quantitatively using point counting and image analysis software methods.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Varia MA, et al. Pimonidazole: a novel hypoxia marker for complementary study of tumor hypoxia and cell proliferation in cervical carcinoma. *Gynecol Oncol.* 1998

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Nov;71(2):270-7.

[2]. Masaki Y, et al. Imaging Mass Spectrometry Revealed the Accumulation Characteristics of the 2-Nitroimidazole-Based Agent "Pimonidazole" in Hypoxia. PLoS One. 2016 Aug 31;11(8):e0161639.

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

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