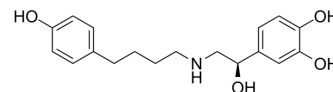


Arbutamine

Cat. No.:	HY-16056
CAS No.:	128470-16-6
Molecular Formula:	C ₁₈ H ₂₃ NO ₄
Molecular Weight:	317.38
Target:	Adrenergic Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



BIOLOGICAL ACTIVITY

Description	Arbutamine is a short-acting, potent and nonselective β -adrenoceptor agonist. Arbutamine stimulates cardiac β_1 -, tracheal β_2 -, and adipocyte β_3 - adrenergic receptors. Arbutamine provides cardiac stress increases heart rate, cardiac contractility, and systolic blood pressure. Arbutamine can be used for cardiac stress agent ^{[1][2][3]} .
IC₅₀ & Target	β -adrenoceptor ^[1]
In Vitro	Arbutamine (0.1-100 nM) increases heart contractile force and pD ₂ value of 8.45. Arbutamine has the affinity constants (K _A) value of 7.32 for cardiac β_1 -adrenergic receptors ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Arbutamine (i.v.; 5, 10, 50, 100, and 250 ng/kg/min) increases mean heart rate, peak positive left ventricular pressure and its first time-derivative, and normal-zone myocardial thickening in 8 open-chest dogs (mean weight, 26.91 kg) ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Ruiz M, et al. Arbutamine stress perfusion imaging in dogs with critical coronary artery stenoses: (99m)Tc-sestamibi versus (201)Tl. J Nucl Med. 2002 May;43(5):664-70.
- [2]. Nagarajan R, et al. A novel catecholamine, arbutamine, for a pharmacological cardiac stress agent. Cardiovasc Drugs Ther. 1996 Mar;10(1):31-8.
- [3]. Abou-Mohamed G, et al. Characterization of the adrenergic activity of arbutamine, a novel agent for pharmacological stress testing. Cardiovasc Drugs Ther. 1996 Mar;10(1):39-47.

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

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