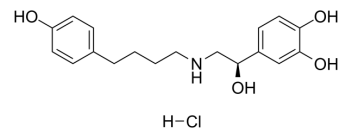


## Arbutamine hydrochloride

<b>Cat. No.:</b>	HY-16056A
<b>CAS No.:</b>	125251-66-3
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>24</sub> ClNO <sub>4</sub>
<b>Molecular Weight:</b>	353.84
<b>Target:</b>	Adrenergic Receptor
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Arbutamine hydrochloride is a short-acting, potent and nonselective $\beta$ -adrenoceptor agonist. Arbutamine hydrochloride stimulates cardiac $\beta_1$ -, tracheal $\beta_2$ -, and adipocyte $\beta_3$ - adrenergic receptors. Arbutamine hydrochloride provides cardiac stress increases heart rate, cardiac contractility, and systolic blood pressure. Arbutamine hydrochloride can be used for cardiac stress agent [1][2][3].
<b>In Vitro</b>	Arbutamine hydrochloride (0.1-100 nM) increases heart contractile force and pD <sub>2</sub> value of 8.45. Arbutamine has the affinity constants (KA) value of 7.32 for cardiac $\beta_1$ -adrenergic receptors[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Arbutamine hydrochloride (i.v.; 5, 10, 50, 100 and 250 ng/kg) 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). 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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