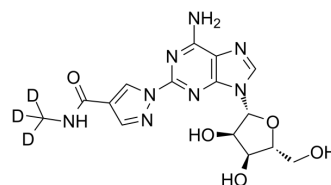


Regadenoson-d3

Cat. No.:	HY-A0168S
Molecular Formula:	C ₁₅ H ₁₅ D ₃ N ₈ O ₅
Molecular Weight:	393.37
Target:	Adenosine Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Regadenoson-d3 (CVT-3146-d3) is the deuterium labeled Regadenoson. Regadenoson (CVT-3146) is a potent and selective A2A adenosine receptor agonist, with K _i s of 290 and 1120 nM for rat and pig adenosine A2A receptor, respectively. Regadenoson is selective for the adenosine A2A receptor over adenosine A1 and A2B receptors, and shows 13-fold selectivity over the human adenosine A1 receptor. Regadenoson is a vasodilator stress agent has shifted the landscape of vasodilator myocardial perfusion imaging. Regadenoson increases blood-brain barrier (BBB) permeability in rodents ^{[1][2][3]} .
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Jackson S, et al. The effect of regadenoson on the integrity of the human blood-brain barrier, a pilot study. *J Neurooncol.* 2017;132(3):513-519.
- [3]. Palle VP, et al. Structure-affinity relationships of the affinity of 2-pyrazolyl adenosine analogues for the adenosine A2A receptor. *Bioorg Med Chem Lett.* 2002;12(20):2935-2939.
- [4]. Golzar Y, et al. Regadenoson use in patients with chronic obstructive pulmonary disease: the state of current knowledge. *Int J Chron Obstruct Pulmon Dis.* 2014;9:129-137. Published 2014 Jan 22.

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

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