

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# PRODUCT INFORMATION



Saxagliptin-<sup>13</sup>C-d<sub>2</sub> (hydrochloride)

Item No. 26709

Formal Name: (1S,3S,5S)-2-((S)-2-amino-2-((1r,3R,5R,7S)-3-

hydroxyadamantan-1-yl)acetyl)-2-azabicyclo[3.1.0]

hexane-6-13C-6,6-d<sub>2</sub>-3-carbonitrile, monohydrochloride

MF: C<sub>17</sub>[<sup>13</sup>C]H<sub>23</sub>D<sub>2</sub>N<sub>3</sub>O<sub>2</sub> • HCl

FW: 354.9

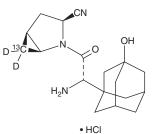
**Chemical Purity:** ≥95% (Saxagliptin)

Deuterium

Incorporation:  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>2</sub>);  $\leq$ 1% d<sub>0</sub>

Supplied as: A solid Storage: -20°C Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



#### **Laboratory Procedures**

Saxagliptin-<sup>13</sup>C-d<sub>2</sub> (hydrochloride) is intended for use as an internal standard for the quantification of Saxagliptin (Item No. 23697) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Saxagliptin-<sup>13</sup>C-d<sub>2</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the saxagliptin-13C-d<sub>2</sub> (hydrochloride) in the solvent of choice. Saxagliptin-13C-d<sub>2</sub> (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of saxagliptin-13C-d2 (hydrochloride) in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

### Description

Saxagliptin is a potent inhibitor of dipeptidyl peptidase 4 (DPP-4; K<sub>i</sub> = 0.6 nM).<sup>1</sup> It inhibits DPP-4 ex vivo  $(ED_{50} = 0.12 \mu mol/kg)$  in plasma from normal fasted rats. Saxagliptin (0.3-3 mg/kg) reduces plasma glucose levels in Zucker<sup>fa/fa</sup> diabetic rats in a dose-dependent manner. Oral administration at doses ranging from 1-10 µmol/kg increases plasma insulin levels and improves glucose clearance in ob/ob mice, a transgenic model of obesity. Saxagliptin induces systolic and diastolic dysfunction, reduces contractile force, and exacerbates ischemia-reperfusion injury-induced cardiac dysfunction in isolated guinea pig hearts.<sup>2</sup> Formulations containing saxagliptin have been used for the treatment of type 2 diabetes.

#### References

- 1. Augeri, D.J., Robl, J.A., Betebenner, D.A., et al. Discovery and preclinical profile of Saxagliptin (BMS-477118): A highly potent, long-acting, orally active dipeptidyl peptidase IV inhibitor for the treatment of type 2 diabetes. J. Med. Chem. 48(15), 5025-5037 (2005).
- 2. Koyani, C.N., Kolesnik, E., Wölkart, G., et al. Dipeptidyl peptidase-4 independent cardiac dysfunction links saxagliptin to heart failure. Biochem. Pharmacol. 145(1), 64-80 (2017).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

al should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution

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