

# PRODUCT INFORMATION



## Palonosetron-d<sub>3</sub> (hydrochloride)

Item No. 29049

**Formal Name:** (S)-2-((S)-quinuclidin-3-yl-3-d)-2,3,3a,4,5,6-hexahydro-1H-benzo[de]isoquinolin-1-one-3,3-d<sub>2</sub>, monohydrochloride

**Synonym:** RS 25259-197-d<sub>3</sub>

**MF:** C<sub>19</sub>H<sub>21</sub>D<sub>3</sub>N<sub>2</sub>O • HCl

**FW:** 335.9

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

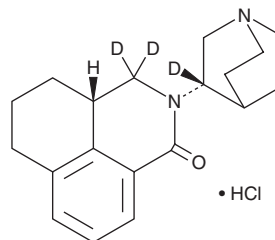
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years



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

### Laboratory Procedures

Palonosetron-d<sub>3</sub> (hydrochloride) is intended for use as an internal standard for the quantification of palonosetron (Item No. 16752) 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).

Palonosetron-d<sub>3</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the palonosetron-d<sub>3</sub> (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Palonosetron-d<sub>3</sub> (hydrochloride) is soluble in the organic solvent DMSO.

### Description

Palonosetron is an antagonist of the serotonin (5-HT) receptor subtype 5-HT<sub>3</sub> (K<sub>i</sub> = 0.04 nM).<sup>1</sup> It is selective for 5-HT<sub>3</sub> over 5-HT<sub>1A</sub>, 5-HT<sub>1D</sub>, 5-HT<sub>2A</sub>, and 5-HT<sub>2C</sub> receptors (K<sub>i</sub>s = ≥15.85 μM for all), as well as a panel of additional neurotransmitter receptors. Palonosetron inhibits 5-HT-induced contraction in isolated guinea pig ileum. It inhibits cisplatin-induced emesis in ferrets (ID<sub>50</sub> = 1.1 μg/kg, i.v.) as well as emesis induced by cisplatin (Item No. 13119), dacarbazine (Item No. 21877), actinomycin D (Item No. 11421), and mechlorethamine in dogs (ID<sub>50</sub>s = 1.9, 4.1, 4.9, and 4.4 μg/kg, respectively).<sup>2</sup> Formulations containing palonosetron have been used in the treatment of postoperative or chemotherapy-induced nausea and vomiting.

### References

1. Wong, E.H., Clark, R., Leung, E., *et al.* The interaction of RS 25259-197, a potent and selective antagonist, with 5-HT<sub>3</sub> receptors, *in vitro*. *Br. J. Pharmacol.* **114**(4), 851-859 (1995).
2. Eglen, R.M., Lee, C.H., Smith, W.L., *et al.* Pharmacological characterization of RS 25259-197, a novel and selective 5-HT<sub>3</sub> receptor antagonist, *in vivo*. *Br. J. Pharmacol.* **114**(4), 860-866 (1995).

#### WARNING

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

#### SAFETY DATA

This material 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
[WWW.CAYMANCHEM.COM](http://WWW.CAYMANCHEM.COM)