

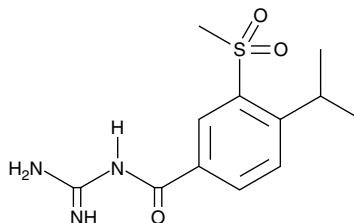
# Product Information



## Cariporide

Item No. 16935

**CAS Registry No.:** 159138-80-4  
**Formal Name:** N-(aminoiminomethyl)-4-(1-methylethyl)-3-(methylsulfonyl)-benzamide  
**Synonym:** HOE 642  
**MF:** C<sub>12</sub>H<sub>17</sub>N<sub>3</sub>O<sub>3</sub>S  
**FW:** 283.3  
**Purity:** ≥95%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 210, 260 nm



### Laboratory Procedures

For long term storage, we suggest that cariporide be stored as supplied at -20°C. It should be stable for at least two years.

Cariporide is supplied as a crystalline solid. A stock solution may be made by dissolving the cariporide in the solvent of choice. Cariporide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of cariporide in ethanol and DMF is approximately 10 mg/ml and approximately 20 mg/ml in DMSO.

Cariporide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cariporide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Cariporide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The sodium-hydrogen exchanger isoform-1 (NHE-1) is the predominant isoform of the Na<sup>+</sup>/H<sup>+</sup> exchanger and is expressed in the heart where it contributes to cardiomyocyte pH homeostasis.<sup>1</sup> It plays an important role in the myocardial response to ischemia-reperfusion.<sup>2</sup> Cariporide is a benzoylguanidine compound that inhibits NHE-1 with IC<sub>50</sub> values ranging from 0.03-3.4 μM.<sup>1</sup> It displays selectivity for NHE-1 over NHE-2, NHE-3, and NHE-5 (IC<sub>50</sub>s = 4.3-62, 1 to >100, and >30 μM, respectively).<sup>1</sup> The cardioprotective efficacy of cariporide has been examined in clinical investigations of patients at risk for myocardial infarction.<sup>1,2</sup>

### References

1. Masereel, B., Pochet, L., and Laeckmann, D. An overview of inhibitors of Na<sup>+</sup>/H<sup>+</sup> exchanger. *Eur. J. Med. Chem.* **38(6)**, 547-554 (2003).
2. Karmazyn, M. The myocardial sodium-hydrogen exchanger (NHE) and its role in mediating ischemic and reperfusion injury. *Keio J. Med.* **47(2)**, 65-72 (1998).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/16935](http://www.caymanchem.com/catalog/16935)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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 Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

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