# Product Data Sheet

Product Name: SE 175
Cat. No.: GC16204

## Chemical Properties

| | | | |
|---|---|---|---|
| Cas. No. | 258278-64-7 | | |
| Chemical Name | 2-[[4-[(nitrooxy)methyl]benzoyl]thio]-benzoic acid, methyl ester | | |
| SMILES | COC(=O)c1ccccc1SC(=O)c1ccc(CO[N](=O)O)cc1 | | |
| Formula | $C_{16}H_{13}NO_6S$ | M.Wt | 347.3 |
| Solubility | ≤11mg/ml in ethanol;35mg/ml in DMSO;50mg/ml in dimethyl formamide | Storage | Store at -20°C |
| General tips | For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months. | | |
| Shipping Condition | Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request. | | |
| Structure | SE 175 | | |

## Background

SE 175 is a NO donor.

Nitric oxide (NO) mediates various physiological and pathophysiological processes in the cardiovascular system. Pharmacological compounds releasing NO are useful tools for evaluating the critical role of NO in cardiovascular physiology and therapeutics. These NO donors constitute two broad classes of compounds, those releasing NO and those requiring enzymatic metabolism to generate NO.

In vitro: SE 175 was identified as an organic nitrate donor of the same class as nitroglycerin, which acted as NO-donors following reductive transformation of the nitrate group to nitric oxide. SE 175 and other nitroxyacylated thiosalicylates were developed in an effort to facilitate such reductive process and accelerate the release of NO. SE 175 was found to be stable in buffer or saline solution. In addition, SE 175 was able to stimulate endothelial soluble guanylate cyclase and induce aortic vasorelaxation with an


***Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com***
***Address: 10292 Central Ave. #205, Montclair, CA, USA***

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EC50 of 20 μM, which was intermediate in potency between isosorbide dinitrate and nitroglycerine [1].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:
[1] Endres, S. ,Hacker, A.,Noack, E., et al. NO-donors, Part 3: Nitrooxyacylated thiosalicylates and salicylates-synthesis and biological activities. European Journal of Medicinal Chemistry 34, 895-901 (1999).


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