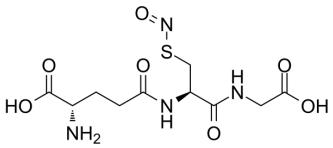
Nitrosoglutathione

Cat. No.:	HY-D0845
CAS No.:	57564-91-7
Molecular Formula:	$C_{10}H_{16}N_4O_7S$
Molecular Weight:	336.32
Target:	Angiotensin Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Nitrosoglutathione (GSNO), a exogenous NO donor and a substrate for rat alcohol dehydrogenase class III isoenzyme, inhibits cerebrovascular angiotensin II-dependent and -independent AT1 receptor responses[1][2][3][4].
In Vitro	Nitrosoglutathione (GSNO, 250 μM) prevents 90% of the response to 0.1 μM 5-HT and 40% of the response to 1.0 μM 5-HT in rings treated with LY-83583, indicating an effect of GSNO that was independent of guanylate cyclase activity[5]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Nitrosoglutathione (GSNO, 8 mg/kg) significantly decreases systolic, diastolic, and mean arterial pressures in PE-induced rats from day 14 through day 20[3]. Nitrosoglutathione (GSNO, 0.2 and 0.6 mg/kg) significantly inhibits superoxide production and suppressed NF-κB activation, iNOS induction, and 3-nitrotyrosine expression, butup-regulates endothelial NOS expression in the flap vessels[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Lewis rats[4].
Dosage:	0.2 and 0.6 mg/kg.
Administration:	Slow intravenous injection via the opposite femoral vein into each rat.
Result:	Animals treated with 0.2 mg of GSNO per kilogram before reperfusion had an intermediate survival rate (40.2 ± 4.9%). Although 0.6 mg/kg of GSNO showed a better rescuing effect than 150 mg/kg of NAC, there was no significant difference between the groups.

REFERENCES

[1]. Marie-Lynda Bouressam, et al. S-nitrosoglutathione inhibits cerebrovascular angiotensin II-dependent and -independent AT 1 receptor responses: A possible role of S-nitrosation. Br J Pharmacol. 2019 Jun;176(12):2049-2062.

[2]. D E Jensen, et al. S-Nitrosoglutathione is a substrate for rat alcohol dehydrogenase class III isoenzyme. Biochem J. 1998 Apr 15;331 (Pt 2)(Pt 2):659-68.

[3]. Caneta Brown, et al. The effects of S-nitrosoglutathione and S-nitroso-N-acetyl-D, L-penicillamine in a rat model of pre-eclampsia. J Nat Sci Biol Med. 2013 Jul;4(2):330-5.

[4]. Yur-Ren Kuo, et al. Nitrosoglutathione promotes flap survival via suppression of reperfusion injury-induced superoxide and inducible nitric oxide synthase induction. J Trauma. 2004 Nov;57(5):1025-31.

[5]. Eva Nozik-Grayck, et al. Pulmonary vasoconstriction by serotonin is inhibited by S-nitrosoglutathione. Am J Physiol Lung Cell Mol Physiol. 2002 May;282(5):L1057-65.

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