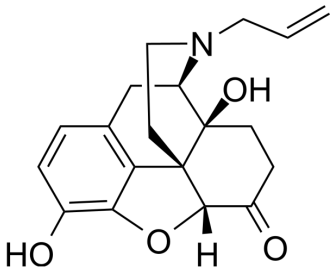
Naloxone

Cat. No.:	HY-17417A
CAS No.:	465-65-6
Molecular Formula:	$C_{19}H_{21}NO_4$
Molecular Weight:	327.37
Target:	Opioid Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Naloxone is an antagonist of Opioid receptor. Naloxone alleviates opioid-overdose-induced respiratory depression. Naloxone may cause pulmonary edema and cardiac arrhythmias[1].
In Vivo	Naloxone (2.0 mg/kg with constant infusion of 1.7 mg/kg/h) causes a significant improvement in neurobehavioral outcome which persists up to 4 weeks postinjury in rat. Naloxone treatment causes a modest and nonsignificant increase in mean arterial blood pressure (MAP)[1]. Naloxone (0.4 mg/kg) causes memory facilitation and antagonizes the amnestic effect of ACTH and epinephrine in rat[2]. Naloxone treatment diminishes the strength of the initial tetanus in a dose-related manner in cats. Naloxone (5 or 10 mg/kg, i.v.) causes subsequent doses of morphine to produce less PTP depression but has no effect on maximal twitch depression[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Rep. 2020 Mar 17;30(11):3625-3631.e6.
- Eur J Pain. 2017 May;21(5):804-814.

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REFERENCES

[1]. McIntosh TK, et al. Beneficial effect of the nonselective opiate antagonist naloxone hydrochloride and the thyrotropin-releasing hormone (TRH) analog YM-14673 on long-term neurobehavioral outcome following experimental brain injury in the rat. J Neurotrau

[2]. Sun L, et al. Endocannabinoid activation of CB1 receptors contributes to long-lasting reversal of neuropathic pain by repetitive spinal cord stimulation. Eur J Pain. 2017 May;21(5):804-814.

[3]. Izquierdo I, et al. Effect of ACTH, epinephrine, beta-endorphin, naloxone, and of the combination of naloxone or beta-endorphinwith ACTH or epinephrine on memory consolidation. Psychoneuroendocrinology. 1983;8(1):81-7.

[4]. Soteropoulos GC, et al. Neuromuscular effects of morphine and naloxone. J Pharmacol Exp Ther. 1973 Jan;184(1):136-42.

Caution: Product has not been fully validated for medical applications. For research use only.

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