# **PRODUCT** INFORMATION



Carbetocin (acetate)

Item No. 33234

CAS Registry No.:	1631754-28-3	он I
Formal Name:	N-(4-mercapto-1-oxobutyl)-O-methyl-	
	L-tyrosyl-L-isoleucyl-L-glutaminyl-L-	
	asparaginyl-L-cysteinyl-L-prolyl-L-leucyl-	H. N
	glycinamide, cyclic (1 $\rightarrow$ 5)-thioether,	
	acetate	J T NH2
MF:	$C_{45}H_{69}N_{11}O_{12}S \bullet XC_{2}H_{4}O_{2}$	
FW:	988.2	s N N
Purity:	≥98%	
Supplied as:	A crystalline solid	
Storage:	-20°C	
Stability:	≥4 years	I
Information represents the product specifications. Batch specific analytical results are provided on each certificate of an		

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# Laboratory Procedures

Carbetocin (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the carbetocin (acetate) in the solvent of choice, which should be purged with an inert gas. Carbetocin (acetate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of carbetocin (acetate) in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of carbetocin (acetate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of carbetocin (acetate) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

# Description

Carbetocin is an oxytocin receptor agonist and a peptide analog of oxytocin (Item No. 11799).<sup>1</sup> It selectively binds to oxytocin receptors over vasopressin  $V_2$  receptors (K<sub>d</sub>s = 1.96 and 61.3 nM, respectively). Carbetocin induces contraction of isolated rat uterine strips (EC<sub>50</sub> = 48 nM) and inhibits oxytocin-induced contraction of isolated rat uterine strips ( $pA_2 = 8.21$ ). *In vivo*, carbetocin (0.35 mg/animal) increases the frequency and amplitude of uterine contractions in early postpartum dairy cows.<sup>2</sup> Carbetocin (6.4 mg/kg, i.p.) prevents stress-induced reinstatement of morphine-seeking behavior in mice.<sup>3</sup> It also reverses learned helplessness and decreases social withdrawal induced by chronic unpredictable stress in tree shrews.<sup>4</sup> Formulations containing carbetocin have been used in the prevention of excessive bleeding after childbirth.

# References

- 1. Engstrøm, T., Barth, T., Melin, P., et al. Eur. J. Pharmacol. 355(2-3), 203-210 (1998).
- 2. Bajcsy, Á.C., Szenci, O., van der Weijden, G.C., et al. Theriogenology 65(2), 400-414 (2006).
- 3. Zanos, P., Georgiou, P., Wright, S.R., et al. Neuropsychopharmacology 39(4), 855-865 (2014).
- 4. Meng, X., Shen, F., Li, C., et al. Pharmacol. Biochem. Behav. 145, 1-8 (2016).

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

## SAFFTY 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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