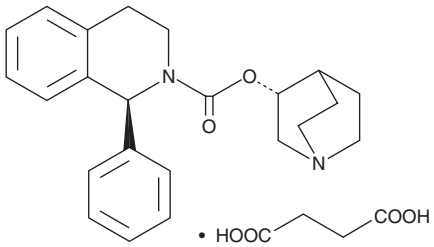
PRODUCT INFORMATION

Solifenacin (succinate)

Item No. 17320

CAS Registry No.:	242478-38-2
Formal Name:	butanedioic acid, compd. with (1S)-(3R)-1-azabicyclo[2.2.2]oct-3-yl 3,4-dihydro-1-phenyl-2(1H)-isoquinolinecarboxylate
Synonym:	YM-67905
MF:	$C_{23}H_{26}N_2O_2 \bullet C_4H_6O_4$
FW:	480.6
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Solifenacin (succinate) is supplied as a crystalline solid. A stock solution may be made by dissolving the solifenacin (succinate) in the solvent of choice, which should be purged with an inert gas. Solifenacin (succinate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of solifenacin (succinate) in ethanol is approximately 5 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 solifenacin (succinate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of solifenacin (succinate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Solifenacin is a competitive antagonist of M_1, M_2, and M_3 muscarinic acetylcholine receptors (K_is = 25, 125, and 10 nM, respectively, for the human receptors).[1] It inhibits calcium mobilization induced by carbachol (carbamoylcholine; Item No. 14486) in isolated guinea pig detrusor muscle cells (K_i = 4 nM).[2] Solifenacin inhibits carbachol-induced contraction of isolated guinea pig urinary bladder smooth muscle. *In vivo*, solifenacin (0.03-1 mg/kg) inhibits carbachol-induced increases in urinary bladder pressure in anesthetized rats. Formulations containing solifenacin have been used in the treatment of overactive bladder.

References

1. Hegde, S.S. Muscarinic receptors in the bladder: From basic research to therapeutics. *Br. J. Pharmacol.* **147(Suppl 2)**, S80-S87 (2006).
2. Ikeda, K., Koboyashi, S., Suzuki, M., *et al.* M_3 receptor antagonism by the novel antimuscarinic agent solifenacin in the urinary bladder and salivary gland. *Naunyn Schmiedebergs Arch. Pharmacol.* **366(2)**, 97-103 (2002).

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