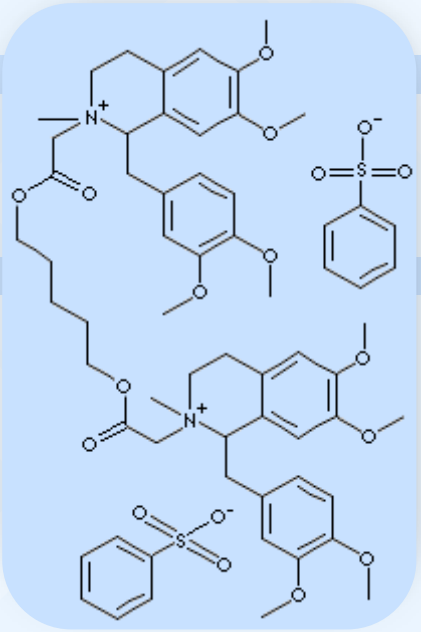
ATRACURIUM BESYLATE

SYNONYMS

5-(3-(1-((3,4-Dimethoxyphenyl)methyl)-6,7-dimethoxy-2-methyl-3,4-dihydro-1H-isoquinolin-2-ium-2-yl)propanoyloxy)pentyl 3-(1-((3,4-dimethoxyphenyl)methyl)-6,7-dimethoxy-2-methyl-3,4-dihydro-1H-isoquinolin-2-ium-2-yl)propanoate benzenesulfonate benzenesulfonate; 2-(2-Carboxyethyl)-1,2,3,4-tetrahydro-6,7-dimethoxy-2-methyl-1-veratrylisoquinolinium benzenesulfonate, pentamethylene ester; Atracurii besilas; Besilato de atracurio; Tracrium; 2,2'-(1,5-Pentanediylbis(oxy(3-oxo-3,1-propanediyl)))bis(1-(3,4-dimethoxyphenyl)methyl)-1,2,3,4-tetrahydro-6,7-dimethoxy-2-methylisoquinolinium) dibenzenesulfonate;



PRODUCT IDENTIFICATION

CAS RN	64228-81-5; 64228-79-1(Parent)
EINECS RN	264-743-4
FORMULA	$C_{65}H_{82}N_2O_{18}S_2$
MOL WEIGHT	1243.48

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	White to yellowish powder
MELTING POINT	
BOILING POINT	
DENSITY	
SOLUBILITY IN WATER	Soluble (soluble in acetonitrile, in ethanol, methylene chloride)
pH	
VAPOR DENSITY	
REFRACTIVE INDEX	
FLASH POINT	

GENERAL DESCRIPTION

Neuromuscular blockers relax skeletal muscle tone by blocking transmission of key neurotransmitters through the neuron receptors at the neuromuscular junction (NMJ). They are divided into two major categories, depolarizing and non-depolarizing neuromuscular blockers, corresponding to the manner in which they exert their therapeutic effect. Depolarizing neuromuscular blocking agents mimic the effects of the neurotransmitter acetylcholine (ACh) and change the interaction between ACh and neuron receptors. Blockade occurs because membranes surrounding the neuromuscular junction become unresponsive to typical ACh-receptor interaction. Non-depolarizing neuromuscular blockers bind to receptors to prevent transmission of impulses through ACh neurotransmitters. Neuromuscular blockers are primarily used in a clinical or hospital setting. In the United States, they are known by several generic and brand names, including atracurium (Tracurium), cisatracurium (Nimbex), doxacurium (Neuromax), mivacurium (Mivacron), pancuronium (Pavulon), pipecuronium (Arduan), rocuronium (Zemeron), succinylcholine (Anectine), tubocurarine, and vecuronium (Norcuron). (source: http://www.healthline.com/)

Atracurium is a nondepolarizing skeletal muscle relaxant. Atracurium can be used most advantageously if muscle twitch response to peripheral nerve stimulation is monitored to assess degree of muscle relaxation. The duration of neuromuscular block produced by Atracurium is approximately one third to one half the duration of block by d-tubocurarine, metocurine, and pancuronium at initially equipotent doses. As with other nondepolarizing neuromuscular blockers, the time to onset of paralysis decreases and the duration of maximum effect increases with increasing doses of Atracurium. Repeated administration of maintenance doses of Atracurium has no cumulative effect on the duration of neuromuscular block if recovery is allowed to begin prior to repeat dosing. Moreover, the time needed to recover from repeat doses does not change with additional doses. Repeat doses can therefore be administered at relatively

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regular intervals with predictable results. Atracurium antagonizes the neurotransmitter action of acetylcholine by binding competitively with cholinergic receptor sites on the motor end-plate. This antagonism is inhibited, and neuromuscular block reversed, by acetylcholinesterase inhibitors such as neostigmine, edrophonium, and pyridostigmine. (source: http://www.drugbank.ca/)

Neuromuscular blockers

Product	CAS RN.
Alcuronium	23214-96-2
Atracurium	64228-79-1
Atracurium Besylate	64228-81-5
Boldine	476-70-0
Cisatracurium	96946-41-7
Cisatracurium Besylate	96946-42-8
Clidinium bromide	3485-62-9
Curare	8063-06-7
Decamethonium	156-74-1
Domoic Acid	14277-97-5
Doxacurium Chloride	106819-53-8
Ethylcholine Aziridinium	63918-37-6
Gallamine Triethiodide	65-29-2
Gallamine	153-76-4
Glycopyrrolate	596-51-0
Grayanotoxin I	4720-09-6
Metocurine	5152-30-7
Metocurine Iodide	7601-55-0
Mivacurium	106791-40-6
Mivacurium Chloride	106861-44-3
Neosaxitoxin	64296-20-4
Pancuronium Bromide	15500-66-0
Pipecuronium	68399-58-6
Pipecuronium Bromide	52212-02-9
Pyrantel	15686-83-6
Rapacuronium Bromide	156137-99-4
Rocuronium	143558-00-3
Rocuronium Bromide	119302-91-9
Succinylcholine	306-40-1
Succinylcholine Chloride	71-27-2
Sugammadex Sodium	343306-79-6
Taipoxin	52019-39-3
Toxiferine	302-30-7
Tubocurarine Chloride	6989-98-6
Tubocurarine	57-95-4
Vecuronium Bromide	50700-72-6
Vesamicol	22232-64-0

STABILITY AND REACTIVITY

STABILITY Stable under normal conditions. Instable under light.

ATRACURIUM BESYLATE

INCOMPATIBLE MATERIALS	Strong oxidizing agents.
DECOMPOSITION PRODUCTS	Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides.
POLYMERIZATION	Will not occur
NFPA RATINGS	Health: 1, Flammability: 0, Reactivity: 0

SAFETY

HAZARD NOTES	Caution: Avoid contact and inhalation. Target organ(s): Skeletal muscle.
EYE	Cause eye irritation.
SKIN	Cause skin irritation.
INGESTION	Cause respiratory system irritation.
INHALATION	Harmful if swallowed.
CHRONIC	

SALES SPECIFICATION

APPEARANCE	White to yellowish powder
IDENTIFICATION	Pass tests (IR, UV, HPLC)
ASSAY	96.0% ~ 102.0%
LOSS ON DRYING	0.5% max
RELATED SUBSTANCES	Total impurity: 3,0% max, Individual impurity: 1.0% max,
WATER	5.0% max
HEAVY METALS	20ppm max

TRANSPORT & REGULATORY INFORMATION

UN NO.	
HAZARD CLASS	
PACKING GROUP	
HAZARD SYMBOL	XN
RISK PHRASES	20/21/22-36/37/38
SAFETY PHRASES	26-36

PACKING

PRICE

U$4,500 (500g)