Pipecuronium bromide

Cat. No.: HY-B0743A
CAS No.: 52212-02-9
Molecular Formula: C₃₅H₆₂Br₂N₄O₄
Molecular Weight: 762.7
Target: nAChR
Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling
Storage: Please store the product under the recommended conditions in the COA.

BIOLOGICAL ACTIVITY

| Description | Pipecuronium bromide is a potent long-acting nondepolarizing steroidal neuromuscular blocking agent (NMBA), and a bisquaternary ammonium compound. Pipecuronium bromide is a powerful competitive nAChR antagonist with a $K_d$ of 3.06 $\mu M$.

| IC₅₀ & Target | nAChR

In Vitro
Sugammadex has a high affinity for Pipecuronium bromide. As Pipecuronium bromide is about 6 to 7 times more potent than Rocuronium, fewer molecules are required to achieve a comparative blockade than in the case of Rocuronium.

In Vivo
The average ED₉₅ is 0.045mg/kg (0.035-0.059 mg/kg) of Pipecuronium bromide, the onset of action varies between 2 and 6.3 minutes, depending on the dose and the background anesthesia. Pipecuronium bromide does not liberate histamine, it has no cardiovascular side effects even in doses of 3× ED₉₅, and anaphylaxis does not appear to be a problem.
Carboxymethylated $\gamma$-cyclodextrin shows efficient and complete reversal of the Pipecuronium bromide induced neuromuscular block in an ex vivo rat diaphragm experiment.

REFERENCES


