

Effects Of Fasciculin 2, An Anticholinesterase Polypeptide From Green Mamba Venom, On Neuromuscular Transmission In Mouse Diaphragm Preparations Neurosci.

Abstract:

Fasciculin 2, a polypeptide from green mamba (*Dendroaspis angusticeps*) venom, causes an increase in the twitch response of mouse phrenic nerve-hemidiaphragm preparations to indirect stimulation. Intracellular recording reveals that fasciculin 2 augments neuromuscular transmission by increasing the amplitude and duration of endplate potentials. Its action is not reversed by washing. Interactions with neostigmine confirm that fasciculin 2 acts as an anticholinesterase. It has no presynaptic actions on transmitter release or postsynaptic receptor blocking actions. On chicken muscle preparations, fasciculin 2 has no anticholinesterase actions. Because of this selectivity and its apparent irreversibility, fasciculin 2 should be useful in characterizing different forms of acetylcholinesterase.