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Perampanel

National Cancer Institute

Source

National Cancer Institute. *Perampanel*. NCI Thesaurus. Code C75029.

An orally active, non-competitive, and selective alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) glutamate receptor antagonist, with anti-epileptic activity. Although the mechanism of action through which perampanel exerts its antiepileptic effect has not been fully elucidated, this agent antagonizes the AMPA subtype of the excitatory glutamate receptor found on postsynaptic neurons in the central nervous system (CNS). This antagonistic action prevents AMPA receptor activation by glutamate and results in the inhibition of neuronal excitation, repetitive neuronal firing, and the stabilization of hyper-excited neural membranes. Glutamate, the primary excitatory neurotransmitter in the CNS, plays an important role in various neurological disorders caused by neuronal hyperexcitation.