

Amitriptyline (202): sc-57613

BACKGROUND

Amitriptyline hydrochloride is a white, odorless, crystalline tricyclic, compound that is freely soluble in water. It has a molecular weight of 277.403 g/mol and is metabolized by the oxidation of the side chain resulting in production of the secondary amine nortriptyline and N-oxide amitriptylinoxide. Amitriptyline affects serotonin and noradrenaline reuptake, and it is dispensed as an antidepressant drug in tablet form for the treatment of endogenous depression, involuntional melancholia, reactive depression and for depression secondary to alcoholism and schizophrenia. Amitriptyline may also be used to treat nocturnal enuresis. Overdose of Amitriptyline may lead to irreversible neural impairment associated with its detergent nature, as well as potent cardiotoxicity.

REFERENCES

1. van Amerongen, P. 1979. Double-blind clinical trial of the antidepressant action of amineptine. *Curr. Med. Res. Opin.* 6: 93-100.
2. Ray, C.D. 1982. Spinal epidural electrical stimulation for pain control. Practical details and results. *Appl. Neurophysiol.* 44: 194-206.
3. Cervo, L. and Samanin, R. 1988. Repeated treatment with Imipramine and Amitriptyline reduced the immobility of rats in the swimming test by enhancing dopamine mechanisms in the nucleus accumbens. *J. Pharm. Pharmacol.* 40: 155-156.
4. Breyer-Pfaff, U. 2004. The metabolic fate of Amitriptyline, nortriptyline and amitriptylinoxide in man. *Drug Metab. Rev.* 36: 723-46.
5. Lee, D.W. and Baney, R. 2004. Detoxification of Amitriptyline by oligochitosan derivatives. *Biotechnol. Lett.* 26: 713-716.
6. Deo, N., Somasundaran, T. and Somasundaran, P. 2004. Solution properties of Amitriptyline and its partitioning into lipid bilayers. *Colloids Surf. B Biointerfaces* 34: 155-159.
7. Lee, D.W., Flint, J., Morey, T., Dennis, D., Partch, R. and Baney, R. 2005. Aromatic-aromatic interaction of Amitriptyline: implication of overdosed drug detoxification. *J. Pharm. Sci.* 94: 373-381.
8. Otaka, M., Jin, M., Odashima, M., Matsuhashi, T., Wada, I., Horikawa, Y., Komatsu, K., Ohba, R., Oyake, J., Hatakeyama, N. and Watanabe, S. 2005. New strategy of therapy for functional dyspepsia using famotidine, mosapride and Amitriptyline. *Aliment. Pharmacol. Ther.* 2: 42-46.
9. Kitagawa, N., Oda, M., Nobutaka, I., Satoh, H., Totoki, T. and Morimoto, M. 2006. A proposed mechanism for Amitriptyline neurotoxicity based on its detergent nature. *Toxicol. Appl. Pharmacol.* 217: 100-106.

SOURCE

Amitriptyline (202) is a mouse monoclonal antibody raised against Amitriptyline conjugated to KLH.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Amitriptyline (202) is recommended for detection of Amitriptyline by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.