



Phenobarbital (402): sc-66076

BACKGROUND

Phenobarbital is a barbiturate that represents the most widely used and oldest anticonvulsant worldwide. It is the first line choice for the treatment of neo-natal seizures and is as effective at seizure control as Phenytoin and carbamazepine, though the side effects of Phenobarbital (e.g. dizziness, nystagmus and ataxia) are significantly worse. Phenobarbital causes a depression of bodily systems, mainly the central and peripheral nervous systems; thus, the main characteristic of an overdose is a slowdown of bodily functions. Phenobarbital is metabolized by the liver, mainly through hydroxylation and glucuronidation, and is excreted primarily by the kidneys. It has a molecular weight of 232.235 g/mol and a half life of 53 to 118 hours.

REFERENCES

1. Robinson, G.M., Sellers, E.M. and Janecek, E. 1981. Barbiturate and hypnosedative withdrawal by a multiple oral Phenobarbital loading dose technique. *Clin. Pharmacol. Ther.* 30: 71-76.
2. Van Orman, C.B. and Darwish, H.Z. 1985. Efficacy of Phenobarbital in neonatal seizures. *Can. J. Neurol. Sci.* 12: 95-99.
3. Schwankhaus, J.D., Kattah, J.C., Lux, W.E., Masucci, E.F. and Kurtzke, J.F. 1989. Primidone/Phenobarbital-induced periodic alternating nystagmus. *Ann. Ophthalmol.* 21: 230-232.
4. Alonso Gonzalez, A.C., Ortega Valin, L., Santos Buelga, D., Garcia Sanchez, M.J., Santos Borbujo, J., Monzon Corral, L. and Dominguez-Gil Hurlle, A. 1993. Dosage programming of Phenobarbital in neonatal seizures. *J. Clin. Pharm. Ther.* 18: 267-270.
5. Painter, M.J., Scher, M.S., Stein, A.D., Armatti, S., Wang, Z., Gardiner, J.C., Paneth, N., Minnigh, B. and Alvin, J. 1999. Phenobarbital compared with Phenytoin for the treatment of neonatal seizures. *N. Engl. J. Med.* 341: 485-489.
6. Barcia, J.A., Rubio, P., Alós, M., Serralta, A. and Belda, V. 1999. Anticonvulsant and neurotoxic effects of intracerebroventricular injection of Phenytoin, Phenobarbital and carbamazepine in an amygdala-kindling model of epilepsy in the rat. *Epilepsy Res.* 33: 159-167.
7. Rovetta, G., Baratto, L., Farinelli, G. and Monteforte, P. 2001. Three-month follow-up of shoulder-hand syndrome induced by Phenobarbital and treated with gabapentin. *Int. J. Tissue React.* 23: 39-43.
8. Gilbert, T.H., Corley, S.M. and Teskey, G.C. 2002. Conventional anticonvulsant drugs in the guinea pig kindling model of partial seizures: effects of acute Phenobarbital, valproate and ethosuximide. *Exp. Brain Res.* 146: 336-344.
9. Beer, A., Slotkin, T.A., Seidler, F.J., Aldridge, J.E. and Yanai, J. 2005. Nicotine elicited by prenatal exposure to Phenobarbital. *Neuropsychopharmacology* 30: 156-165.

SOURCE

Phenobarbital (402) is a mouse monoclonal antibody raised against Phenobarbital.

PRODUCT

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

APPLICATIONS

Phenobarbital (402) is recommended for detection of Phenobarbital 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.