# Phenobarbital (F1#2G7A7): sc-57971



The Power to Question

## **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 neonatal 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**

- 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.
- Van Orman, C.B. and Darwish, H.Z. 1985. Efficacy of Phenobarbital in neonatal seizures. Can. J. Neurol. Sci. 12: 95-99.
- 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.
- Alonso Gonzalez, A.C., Ortega Valin, L., Santos Buelga, D., Garcia Sanchez, M.J., Santos Borbujo, J., Monzon Corral, L. and Dominguez-Gil Hurle, A. 1993. Dosage programming of Phenobarbital in neonatal seizures. J. Clin. Pharm. Ther. 18: 267-270.
- 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.
- 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.
- 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.
- Beer, A., Slotkin, T.A., Seidler, F.J., Aldridge, J.E. and Yanai, J. 2004. Nicotine elicited by prenatal exposure to Phenobarbital. Neuropsychopharmacology 30: 156-165.

## **SOURCE**

Phenobarbital (F1#2G7A7) is a mouse monoclonal antibody raised against full length Phenobarbital.

#### **PRODUCT**

Each vial contains 100  $\mu g\ lgG_1$  in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

Phenobarbital (F1#2G7A7) is recommended for detection of Phenobarbital of nsr origin 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.

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