N-acetylprocainamide (902): sc-66071



The Power to Question

BACKGROUND

Procainamide, known more commonly as Pronestyl, Procanbid or Procan, is a class la antiarrythmic drug that can be administered orally or intravenously and is used for the treatment of cardiac arrhythmias. Specifically, Procainamide functions by blocking open sodium channels, thereby prolonging the cardiac action potential and causing a slower conduction. The active metabolite of Procainamide is N-acetylprocainamide, which is stronger than Procainamide and is excreted by the renal system and the kidneys. Problematic side effects of Procainamide include myalgia, rash and hypersensitivity reactions (such as agranulocytosis and fever). In some cases, Procainamide may cause autoimmue antibody production against cellular components, which can lead to systemic lupus erythematosus-like reactions.

REFERENCES

- Dutcher, J.S., Strong, J.M., Lucas, S.V., Lee, W.K. and Atkinson, A.J. 1977. Procainamide and N-acetylprocainamide kinetics investigated simultaneously with stable isotope methodology. Clin. Pharmacol. Ther. 22: 447-457.
- Olshansky, B., Martins, J. and Hunt, S. 1982. N-acetylprocainamide causing torsades de pointes. Am. J. Cardiol. 50: 1439-1441.
- Giardina, E.G. 1984. Procainamide: clinical pharmacology and efficacy against ventricular arrhythmias. Ann. N.Y. Acad. Sci. 432: 177-188.
- Funck-Brentano, C., Light, R.T., Lineberry, M.D., Wright, G.M., Roden, D.M. and Woosley, R.L. 1989. Pharmacokinetic and pharmacodynamic interaction of N-acetylprocainamide and Procainamide in humans. J. Cardiovasc. Pharmacol. 14: 364-373.
- Kim, S.Y. and Benowitz, N.L. 1990. Poisoning due to class IA antiarrhythmic drugs. Quinidine, Procainamide and disopyramide. Drug Safety 5: 393-420.
- Takano, M., Kato, M., Takayama, A., Yasuhara, M., Inui, K. and Hori, R. 1992. Transport of Procainamide in a kidney epithelial cell line LLC-PK1. Biochim. Biophys. Acta 1108: 133-139.
- 7. Ellenbogen, K.A., Wood, M.A. and Stambler, B.S. 1993. Procainamide: a perspective on its value and danger. Heart Dis. Stroke 2: 473-476.
- 8. Zamponi, G.W., Sui, X., Codding, P.W. and French, R.J. 1993. Dual actions of Procainamide on batrachotoxin-activated sodium channels: open channel block and prevention of inactivation. Biophys. J. 65: 2324-2334.
- Siraki, A.G., Deterding, L.J., Bonini, M.G., Jiang, J., Ehrenshaft, M., Tomer, K.B. and Mason, R.P. 2008. Procainamide, but not N-acetylprocainamide, induces protein free radical formation on myeloperoxidase: a potential mechanism of agranulocytosis. Chem. Res. Toxicol. 21: 1143-1153.

SOURCE

N-acetylprocainamide (902) is a mouse monoclonal antibody raised against N-acetylprocainamide.

PRODUCT

Each vial contains 100 $\mu g \; lg G_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

N-acetylprocainamide (902) is recommended for detection of N-acetylprocainamide 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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com