SANTA CRUZ BIOTECHNOLOGY, INC.

Lidocaine (603): sc-57901

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lidocaine is a common amino amide-type local anesthetic as well as a Class Ib antiarrhythmic agent. Lidocaine has a longer duration and a more rapid onset of action than amino ester-type local anesthetics. It functions by blocking fast sodium channels in the cell membrane, thereby effectively altering depolarization in neurons. With enough Lidocaine, the membrane will not transmit an action potential, leading to its anesthetic effects. When Lidocaine blocks a cardiac action potential, it decreases automaticity by reducing the slope of phase 0 of depolarization with little effect on the PR interval, QRS complex or QT interval. Systemic exposure to large amounts of Lidocaine may result in negative central nervous system and cardiovascular effects. CYP1A2, a liver enzyme, metabolizes about 90 percent of Lidocaine into the pharmacologically-active metabolites monoethylglycinexylidide and glycinexylidide. Lidocaine has a molecular weight of 234.34 g/mol and a half life of 1.5 to 2 hours.

REFERENCES

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SOURCE

Lidocaine (603) is a mouse monoclonal antibody raised against Lidocaine.

PRODUCT

Each vial contains 100 µl ascites containing IgG_1 with < 0.1% sodium azide.

APPLICATIONS

Lidocaine (603) is recommended for detection of Lidocaine by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

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.