



# Caffeine (1.BB.877): sc-57649

## BACKGROUND

Caffeine is a xanthine alkaloid compound that is present in the beans, leaves and the fruit of over 60 plants, where it acts as a natural pesticide by paralyzing and killing certain insects that feed upon them. In humans, Caffeine functions as a central nervous system stimulant through multiple mechanisms involving receptors and channels at the cell membrane, as well as intracellular action on calcium and cAMP pathways. The principal mode of action of Caffeine is as an antagonist of adenosine receptors in the brain. Caffeine can also increase levels of epinephrine/adrenaline and serotonin, causing positive changes in mood. Caffeine freely diffuses into cells where it causes intracellular calcium release from the calcium stores in the Endoplasmic Reticulum (ER), and it may directly inhibit delayed rectifier and A-type K<sup>+</sup> currents and activate plasmalemmal calcium influx in certain vertebrate and invertebrate neurons.

## REFERENCES

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## SOURCE

Caffeine (1.BB.877) is a mouse monoclonal antibody raised against Caffeine.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Caffeine (1.BB.877) is recommended for detection of Caffeine 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](http://www.scbt.com) for detailed protocols and support products.