

dinitrophenol (M-18): sc-130086

BACKGROUND

Dinitrophenol, also known as 2,4-dinitrophenol or DNP, is a highly toxic metabolic poison that can be modified for use as a pesticide, an explosive or a pharmaceutical compound. When present in the blood stream, dinitrophenol functions to uncouple oxidative phosphorylation by carrying protons across the mitochondrial membrane, a process that eliminates the proton gradient that is necessary for production of ATP. As a result, the energy of the proton gradient is lost as heat and, in the absence of adequate ATP, the body begins to oxidize carbohydrates and fat, thus putting the cell under extreme oxidative stress. Dinitrophenol is used primarily for scientific research, but can be found in a variety of dyes, wood preservatives and, most notably, diet pills (due to its ability to increase rates of metabolism). When mixed with alkalies and ammonia, dinitrophenol forms explosive salts with effects similar to those of TNT (trinitrotoluene).

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PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SOURCE

dinitrophenol (M-18) is a goat polyclonal antibody raised against a dinitrophenol conjugate.

PRODUCT

Each vial contains 100 µl serum.

APPLICATIONS

dinitrophenol (M-18) is recommended for detection of dinitrophenol modified proteins by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

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.