



# dinitrophenyl (109.3): sc-69697

## BACKGROUND

Dinitrophenyl (DNP) is a synthetic cellular metabolic poison that uncouples oxidative phosphorylation by acting as a proton ionophore that carries protons across the mitochondrial membrane. This action causes a rapid consumption of energy without generation of ATP, and thus the energy of the proton gradient is lost as heat. Dinitrophenyl is considered an environmental contaminant as it can pollute the air from automobile exhaust, burning of certain industrial substances and from reaction of nitrogen in air with other atmospheric chemicals. Commercial dinitrophenyl is mainly used for scientific research, but has also been used as a photographic developer and to make dyes, other organic chemicals, wood preservatives, explosives and insect control substances. Dinitrophenyl is often used in biochemistry research to aid in the exploration of the regulation of bioenergetics in different organisms.

## REFERENCES

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## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## SOURCE

dinitrophenyl (109.3) is a mouse monoclonal antibody raised against dinitrophenyl.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

dinitrophenyl (109.3) is recommended for detection of dinitrophenyl-γ by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## SELECT PRODUCT CITATIONS

- Dini, I., Falanga, D., Di Lorenzo, R., Tito, A., Carotenuto, G., Zappelli, C., Grumetto, L., Sacchi, A., Laneri, S. and Apone, F. 2021. An extract from *Ficus carica* cell cultures works as an anti-stress ingredient for the skin. *Antioxidants* 10: 515.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.