

Metallothionein 3 (D-13): sc-164990

BACKGROUND

Metallothionein (MT) is a sulfhydryl- and cysteine-rich protein found in micro-organisms, plants and all invertebrate and vertebrate animals. Metallothioneins are a group of ubiquitous low-molecular-weight proteins that have functional roles in cell growth, repair and differentiation. Metallothionein are implicated primarily in metal ion detoxification as they are essential for the protection of cells against the toxicity of cadmium, mercury and copper. Metallothioneins are known to be broadly expressed in heart, liver, kidney, breast and testis tissue. Metallothionein 3, also known as MT-3 or GIFB (growth inhibitory factor), is a 68 amino acid protein that belongs to the type 1 family and Metallothionein superfamily. While highly expressed in astrocytes of the normal human brain, Metallothionein 3 expression is reduced in the brains of patients with Alzheimer disease.

REFERENCES

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- Kang, Y.J., et al. 2000. Metallothionein inhibits myocardial apoptosis in copper-deficient mice: role of atrial natriuretic peptide. *Lab. Invest.* 80: 745-757.
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CHROMOSOMAL LOCATION

Genetic locus: MT3 (human) mapping to 16q12.2; Mt3 (mouse) mapping to 8 C5.

SOURCE

Metallothionein 3 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Metallothionein 3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-164990 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Metallothionein 3 (D-13) is recommended for detection of Metallothionein 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Metallothionein family members.

Suitable for use as control antibody for Metallothionein 3 siRNA (h): sc-93438, Metallothionein 3 shRNA Plasmid (h): sc-93438-SH and Metallothionein 3 shRNA (h) Lentiviral Particles: sc-93438-V.

Molecular Weight of Metallothionein 3: 7 kDa.

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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- He, J., et al. 2012. Propofol exerts hippocampal neuron protective effects via up-regulation of metallothionein-3. *Neurol. Sci.* 34: 165-171.

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 or our catalog for detailed protocols and support products.



Try **Metallothionein 3 (1F11): sc-293488**, our highly recommended monoclonal alternative to Metallothionein 3 (D-13).