

Metallothionein

COP03

Lot. No. (See product label)

Specification

Description

Metallothionein (MT) is a family of cysteine-rich, low molecular weight (MW ranging from 3500 to 14000 Da) proteins. MTs have the capacity to bind both physiological (Zn, Cu, Se...) and xenobiotic (Cd, Hg, Ag,...) heavy metals through the thiol group of its cysteine residues, which represents nearly the 30% of its amino acidic residues. MT was discovered in 1957 by Vallee and Margoshe from purification of a Cd-binding protein from horse (equine) renal cortex.

Metallothionein function is not clear, but experimental data suggest MTs may provide protection against metal toxicity, be involved in regulation of physiological metals (Zn and Cu) and provide protection against oxidative stress. Metallothionein gene expression is induced by a high variety of stimuli, as metal exposure, oxidative stress, glucocorticoids, hydric stress, etc. The level of the response to these inducers depends on the MT gene. There are four main metallothionein isoforms expressed in humans. In the human body, large quantities are synthesised primarily in the liver and kidneys. Their production is dependent on availability of the dietary minerals, as zinc, copper and selenium, and the amino acids histidine and cysteine. Biomart native rabbit metallothionein contains both form I and form II metallothionein Zinc content greater than 6%.

Source

Rabbit liver

M.W.

6-7KDa

Appearance

off-white lyophilized Powder

Purity

greater than 90%

Storage

Stored at 2-8

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