

## MIA

### Melanoma Inhibitory Activity Protein human, recombinant, *E. coli*

Cat. No.	Amount
PR-492	20 $\mu$ g

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -20°C

#### Avoid freeze / thaw cycles

#### Form

Lyophilized. MIA protein was lyophilized from a solution containing 20 mM Potassium phosphate pH 7.0 and 150 mM KCl.

#### Solubility

It is recommended to reconstitute the lyophilized MIA in sterile bidest H<sub>2</sub>O not less than 100  $\mu$ g/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

#### Endotoxin

Less than 0.1 ng/ $\mu$ g (IEU/ $\mu$ g) of MIA.

#### Molecular Weight

12 kDa

#### Purity

$\geq$  95% by SDS-PAGE and RP-HPLC

#### Description

MIA (Melanoma Inhibitory Activity Protein) acts as a potent tumor cell growth inhibitor for malignant melanoma cells and some other neuroectodermal tumors, including gliomas, in an autocrine fashion. In a study of human melanoma cell lines with different metastatic capacity MIA mRNA expression appeared to be inversely correlated with pigmentation. MIA has been shown to represent a very sensitive and specific serum marker for systemic malignant melanoma that might be useful for staging of primary melanomas, detection of progression from localized to metastatic disease during follow-up, and monitoring therapy of advanced melanomas.

Recombinant human MIA produced in *E. coli* is a single, non-glycosylated, polypeptide chain consisting of 108 amino acids having a total molecular mass of 12.237 kDa. MIA was identified as an inhibitor of *in vitro* growth of malignant melanoma cells. The protein contains a SH3 domain. Human Melanoma Inhibitory protein is purified by proprietary chromatographic techniques.

#### Selected References:

- Lougheed *et al.* (2002) Solution structure and dynamics of melanoma inhibitory activity protein. *J. Biomol. NMR.* **22**:211  
Lougheed *et al.* (2001) Structure of melanoma inhibitory activity protein, a member of a recently identified family of secreted proteins. *Proc. Natl. Acad. Sci. USA* **98**:5515  
Dreau *et al.* (1999) Melanoma-inhibitory activity protein concentrations in blood of melanoma patients treated with immunotherapy. *Oncol. Res.* **11**:55