

Recombinant Human Melanoma Inhibitory Activity Protein (rh MIA)

Synonyms: Melanoma-derived growth regulatory protein precursor, Cartilage-derived retinoic acid-sensitive protein, CD-RAP

Introduction: MIA was identified as an inhibitor of in vitro growth of malignant melanoma cells. The protein contains a SH3 domain. MIA 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.

Description: Recombinant human Melanoma Inhibitory Activity produced in E.Coli is a single, non-glycosylated, polypeptide chain consisting of 108 amino having a total molecular mass of 12237 Dalton. The MIA is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a concentrated solution containing 20 mM Potassium-phosphate and 150 mM potassium chloride.

Solubility: It is recommended to reconstitute the lyophilized rh MIA in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh MIA, although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE

Biological Activity: The biological activity is calculated by the inhibiting effect on the invasion of Mel In Tumor cells (*Bosserhoff et al.2003 Lab Invest. 83, 1583-94*) and found active In Mel in assay.

Endotoxicity: Less than 0.1 ng/µg (IEU/µg) of rh MIA.

Protein content: Protein quantitation was carried out by UV spectroscopy at 280 nm using the absorption coefficient of 19300 M⁻¹cm⁻¹

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| <i>small</i> | 5 µg | Cat.N° | 11343440 |
| <i>medium</i> | 20 µg | Cat.N° | 11343444 |

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