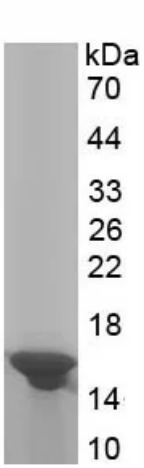
Active Melanoma Inhibitory Activity Protein 1 (MIA1)

Catalog#:PEH12972

概述（Summary）

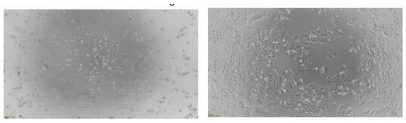
别称（Alternative Names）	CD-RAP; Melanoma-derived growth regulatory protein
纯度（Purity）	Greater than 80% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Gly25-Gln131】
Accession #	Q16674
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	16.4 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Elicits growth inhibition on melanoma cells in vitro as well as some other neuroectodermal tumors, including gliomas.

电泳图（SDS-PAGE image）



Greater than 80% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



A B

Figure 1. Inhibition ofA375 cells proliferation after stimulated with recombinant human MIA1

(A) A375 cells cultured in DMEM, stimulated with 1.25 μg/mL MIA1 for 48h;
(B) Unstimulated A375 cells cultured in DMEM for 48h.

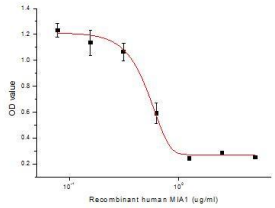


Figure 2. Inhibition ofA375 cells proliferation after stimulated with recombinant human MIA1

Melanoma inhibitory activity (MIA), also known as cartilage-derived retinoic acid-sensitive protein (CD-RAP), is a 12-kDa protein that is secreted from both chondrocytes and malignant melanoma cells. MIA has been reported to have effects on cell growth and adhesion, and it may play a role in melanoma metastasis and cartilage development. In the presence of MIA, we observed enhanced migratory ability of melanocytic cells, induction of melanoma-associated genes as well as inhibition of apoptosis due to anoikis. S100 Calcium Binding Protein B (S100B) is a high affinity ligand for MIA1, a functional binding ELISA assay was conducted to detect the interaction of recombinant human MIA1 and recombinant bovine S100B. Briefly, MIA1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to S100B-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-MIA1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant humant MIA1 and recombinant bovine S100B was shown in Figure 1, the EC50 for this effect is 1.1 ug/mL. To test the effect of MIA1 on cell apoptosis, A375 cells were seeded into triplicate wells of 96-well plates at a density of 4,000 cells/well and allowed to attach overnight, then the medium was replaced with various concentrations of recombinant human MIA1 diluted with 5% serum standard DMEM. After incubated for 48h, cells were observed by inverted microscope and cell viability was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 µl of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37 ℃. Apoptosis of A375 cells after incubation with MIA1 for 48h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 assay after incubation with recombinant human MIA1

for 48h. The result was shown in Figure 2. It was obvious that MIA1 significantly decreased cell viability of A375 cells. The ED50 of recombinant human MIA1 is 0.53 ug/ml.

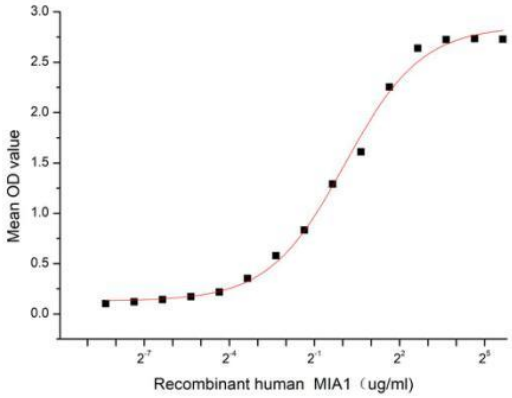


Figure 1. The binding activity of recombinant humant MIA1 and recombinant bovine S100B

注意事项（Note）

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