



Anti-human Mdg-1

20141126BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

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|--------------------|----------------------------|
| Cat.-no.: | 102-PA138S |
| Size: | 100 µg |
| Lot. No.: | According to product label |
| Country of origin: | Germany |

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>98%) recombinant human Mdg-1 (Ser24-Gln223) derived from E. coli.

Target Background

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| Synonyms: | Microvascular endothelial differentiation gene 1 protein, DnaJ homolog subfamily B member 9, ERdj4 |
|------------------|--|

Angiogenesis research has focused on receptors and ligands mediating endothelial cell proliferation and migration. Little is known about the molecular mechanisms that are involved in converting endothelial cells from a proliferative to a differentiated state. Microvascular differentiation gene 1 (Mdg1) has been isolated from differentiating microvascular endothelial cells that had been cultured in collagen type I gels (3D culture). In adult human tissue Mdg1 is expressed in endothelial and epithelial cells. Sequence analysis of the full-length cDNA revealed that the N-terminal region of the putative Mdg1-protein exhibits a high sequence similarity to the J-domain of Hsp40 chaperones. It was shown that this region functions as a bona fide J-domain as it can replace the J-domain of Escherichia coli DnaJ-protein. Mdg1 is also upregulated in primary endothelial and mesangial cells when subjected to various stress stimuli. GFP-Mdg1 fusion constructs showed the Mdg1-protein to be localized within the cytoplasm under control conditions. Stress induces the translocation of Mdg1 into the nucleus, where it accumulates in nucleoli. Costaining with Hdj1, Hdj2, Hsp70, and Hsc70 revealed that Mdg1 colocalizes with Hsp70 and Hdj1 in control and stressed HeLa cells. These data suggest that Mdg1 is involved in the control of cell cycle arrest taking place during terminal cell differentiation and under stress conditions.

References

1. Pröls F et al, Cytogenet Cell Genet 79(1-2):149-50, 1997
2. Pröls F et al, Exp Cell Res 269(1):42-53, 2001
3. Shen Y et al, J Biol Chem 277(18):15947-56, 2002

Database References Antigen

| | |
|------------------------|-------------|
| Protein RefSeq: | NP_036460.1 |
| Uniprot ID: | Q9UBS3 |
| mRNA RefSeq: | NM_012328.2 |

Product Specifications

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|---------------------------|---------------------------------------|
| Species reactivity | human |
| Clone/Ab feature | rabbit IgG |
| Cross reactivity | n.d. |
| Host | rabbit |
| Clonality | polyclonal |
| Purification | Protein A purified |
| Immunogen | recombinant human Mdg-1 (RT #400-021) |
| Formulation | Lyophilized |
| Buffer | 5 mM PBS, pH 7.2 |

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot: Use at 1-5 µg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



Anti-human Mdg-1

Handling/Applications

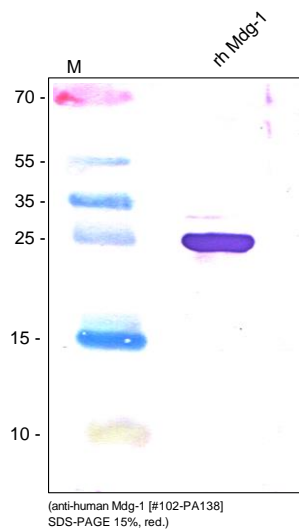


Figure 1: Western analysis of recombinant human Mdg-1 [Cat# 400-021] using an anti-human Mdg-1 polyclonal antibody.