

# MDGA1 (C-17): sc-168568

## BACKGROUND

MDGA1 (MAM domain-containing glycosylphosphatidylinositol anchor protein 1), also known as GMIM (GPI and MAM protein), glycosylphosphatidylinositol-MAM or MAMDC3 (MAM domain-containing protein 3), is a 955 amino acid protein that plays an essential role in cortical neuron migration in the neocortex. Expressed in kidney, brain, skeletal muscle, heart and tumor tissue, MDGA1 localizes to the cell membrane as a GPI- and lipid-anchor. MDGA1 exists as two alternatively spliced isoforms and contains one fibronectin type-III domain, a MAM domain and six Ig-like (immunoglobulin-like) domains. The gene encoding MDGA1 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

## REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. *Hum. Mol. Genet.* 3: 1561-1564.
2. De Juan, C., et al. 2002. Genomic organization of a novel glycosylphosphatidylinositol MAM gene expressed in human tissues and tumors. *Oncogene* 21: 3089-3094.
3. Cesari, R., et al. 2003. Parkin, a gene implicated in autosomal recessive juvenile parkinsonism, is a candidate tumor suppressor gene on chromosome 6q25-q27. *Proc. Natl. Acad. Sci. USA* 100: 5956-5961.
4. Díaz-López, A., et al. 2005. Characterization of MDGA1, a novel human glycosylphosphatidylinositol-anchored protein localized in lipid rafts. *Exp. Cell Res.* 307: 91-99.
5. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. *Genes Chromosomes Cancer* 47: 159-164.
6. Fan, J., et al. 2010. Linkage disequilibrium mapping of the chromosome 6q21-22.31 bipolar I disorder susceptibility locus. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 153B: 29-37.
7. Jalil, S., et al. 2010. Associations among behavior-related susceptibility factors in porphyria cutanea tarda. *Clin. Gastroenterol. Hepatol.* 8: 297-302, 302.e1.

## CHROMOSOMAL LOCATION

Genetic locus: MDGA1 (human) mapping to 6p21.2; Mdg1 (mouse) mapping to 17 A3.3.

## SOURCE

MDGA1 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MDGA1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168568 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MDGA1 (C-17) is recommended for detection of MDGA1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with MDGA2.

MDGA1 (C-17) is also recommended for detection of MDGA1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MDGA1 siRNA (h): sc-95567, MDGA1 siRNA (m): sc-149336, MDGA1 shRNA Plasmid (h): sc-95567-SH, MDGA1 shRNA Plasmid (m): sc-149336-SH, MDGA1 shRNA (h) Lentiviral Particles: sc-95567-V and MDGA1 shRNA (m) Lentiviral Particles: sc-149336-V.

Molecular Weight of MDGA1 isoforms: 106/107 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.