MMD2 (N-16): sc-243496



The Power to Question

BACKGROUND

MMD (monocyte to macrophage differentiation-associated), also known as PAQR11 (progestin and adipoQ receptor family member 11), is a 238 amino acid multi-pass endosomal membrane protein. A member of the ADIPOR family, MMD is expressed almost ubiquitously with high expression in mature macrophages. The gene encoding MMD maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

- 1. Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. Am. J. Hum. Genet. 50: 1235-1242.
- Rehli, M., et al. 1995. Molecular cloning of a novel macrophage maturation-associated transcript encoding a protein with several potential transmembrane domains. Biochem. Biophys. Res. Commun. 217: 661-667.
- 3. Evans, S.C., et al. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
- Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. Oncogene 14: 865-871.
- Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. Br. J. Cancer 77: 192-200.
- Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. Hum. Mutat. 15: 105-113.
- 7. Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.

CHROMOSOMAL LOCATION

Genetic locus: MMD2 (human) mapping to 7p22.1; Mmd2 (mouse) mapping to $5\ G2$.

SOURCE

MMD2 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of MMD2 of human origin.

STORAGE

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

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-243496 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MMD2 (N-16) is recommended for detection of MMD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], 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 MMD.

MMD2 (N-16) is also recommended for detection of MMD2 in additional species, including bovine and porcine.

Suitable for use as control antibody for MMD2 siRNA (h): sc-89597, MMD2 siRNA (m): sc-149477, MMD2 shRNA Plasmid (h): sc-89597-SH, MMD2 shRNA Plasmid (m): sc-149477-SH, MMD2 shRNA (h) Lentiviral Particles: sc-89597-V and MMD2 shRNA (m) Lentiviral Particles: sc-149477-V.

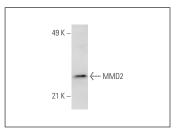
Molecular Weight of MMD2: 29 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



MMD2 (N-16): sc-243496. Western blot analysis of MMD2 expression in SH-SY5Y whole cell lysate.

RESEARCH USE

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