

SPACRCAN (G-16): sc-103232

BACKGROUND

SPACRCAN (sialoprotein associated with cones and rods proteoglycan), also known as IMPG2 (interphotoreceptor matrix proteoglycan 2) or IPM200 (interphotoreceptor matrix proteoglycan of 200 kDa), is a 1,241 amino acid single-pass type I membrane protein that contains 2 EGF-like domains and 2 SEA domains. While involved in the organization of the interphotoreceptor matrix, SPACRCAN may participate in the maturation and maintenance of the light-sensitive photoreceptor outer segment. Defects in SPACRCAN are the cause of retinitis pigmentosa type 56 (RP56), a retinal dystrophy belonging to the group of pigmentary retinopathies. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, patients lose their far peripheral visual field and eventually their central vision as well. Defects in IMPG2 are also the cause of maculopathy IMPG2-related (MACLP-IMPG2), a mild maculopathy characterized by full-field electroretinogram responses within normal limits, normal color vision, elevation of the photoreceptor layer in the foveal region and mild nuclear sclerosis.

REFERENCES

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- Acharya, S., et al. 2000. SPACRCAN, a novel human interphotoreceptor matrix hyaluronan-binding proteoglycan synthesized by photoreceptors and pinealocytes. *J. Biol. Chem.* 275: 6945-6955.
- Hollyfield, J.G., et al. 2001. Interphotoreceptor matrix in the fovea and peripheral retina of the primate *Macaca mulatta*: distribution and glycoforms of SPACR and SPACRCAN. *Exp. Eye Res.* 72: 49-61.
- Kuehn, M.H., et al. 2001. Organization of the human IMPG2 gene and its evaluation as a candidate gene in age-related macular degeneration and other retinal degenerative disorders. *Invest. Ophthalmol. Vis. Sci.* 42: 3123-3129.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607056. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Chen, Q., et al. 2003. SPACRCAN in the interphotoreceptor matrix of the mouse retina: molecular, developmental and promoter analysis. *Exp. Eye Res.* 76: 1-14.

CHROMOSOMAL LOCATION

Genetic locus: IMPG2 (human) mapping to 3q12.3.

SOURCE

SPACRCAN (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPACRCAN 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-103232 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SPACRCAN (G-16) is recommended for detection of SPACRCAN of 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).

SPACRCAN (G-16) is also recommended for detection of SPACRCAN in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SPACRCAN siRNA (h): sc-78137, SPACRCAN shRNA Plasmid (h): sc-78137-SH and SPACRCAN shRNA (h) Lentiviral Particles: sc-78137-V.

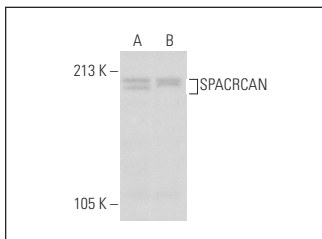
Molecular Weight of SPACRCAN: 230 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

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



SPACRCAN (G-16): sc-103232. Western blot analysis of SPACRCAN expression in HEK293 (A) and HeLa (B) whole cell lysates.

RESEARCH USE

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