SANTA CRUZ BIOTECHNOLOGY, INC.

IRGM (S-14): sc-168202

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IRGM (immunity-related GTPase family, M), also known as IFI1, IRGM1 or LRG-47, is a 181 amino acid membrane protein the localizes to the Golgi apparatus. Widely expressed, IRGM belongs to the interferon-inducible GTPase family. IRGM is suggested to play a role in the innate immune response by regulating autophagy formation. IRGM may regulate proinflammatory cytokine production and prevent endotoxemia upon infection. Defects in the gene encoding IRGM are the cause of susceptibility to inflammatory bowel disease type 19 (IBD19), which is a chronic and relapsing inflammation of the gastrointestinal tract. IBD19 is subdivided into Crohn disease and ulcerative colitis phenotypes. Crohn disease may affect any part of the gastrointestinal tract from the mouth to the anus, but most frequently it involves the terminal ileum and colon. Ulcerative colitis is characterized by continuous inflammation and is limited to rectal and colonic mucosal layers. Both diseases include extraintestinal inflammation of the skin, eyes or joints.

REFERENCES

1. Bekpen, C., et al. 2005. The interferon-inducible p47 (IRG) GTPases in vertebrates: loss of the cell autonomous resistance mechanism in the human lineage. Genome Biol. 6: R92.
2. Singh, S.B., et al. 2006. Human IRGM induces autophagy to eliminate intracellular mycobacteria. Science 313: 1438-1441.
3. Parkes, M., et al. 2007. Sequence variants in the autophagy gene IRGM and multiple other replicating loci contribute to Crohn's disease susceptibility. Nat. Genet. 39: 830-832.
4. Weersma, R.K., et al. 2009. Confirmation of multiple Crohn's disease susceptibility loci in a large Dutch-Belgian cohort. Am. J. Gastroenterol. 104: 630-638.
5. Palomino-Morales, R.J., et al. 2009. Association of ATG16L1 and IRGM genes polymorphisms with inflammatory bowel disease: a meta-analysis approach. Genes Immun. 10: 356-364.
6. Bekpen, C., et al. 2009. Death and resurrection of the human IRGM gene. PLoS Genet. 5: e1000403.
7. Wolfkamp, S.C., et al. 2010. Is there a role for Crohn's disease-associated autophagy genes ATG16L1 and IRGM in formation of granulomas? Eur. J. Gastroenterol. Hepatol. 22: 933-937.

CHROMOSOMAL LOCATION

Genetic locus: IRGM (human) mapping to 5q33.1.

SOURCE

IRGM (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IRGM 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-168202 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IRGM (S-14) is recommended for detection of IRGM 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).

Suitable for use as control antibody for IRGM siRNA (h): sc-168202, IRGM shRNA Plasmid (h): sc-168202-SH and IRGM shRNA (h) Lentiviral Particles: sc-168202-V.

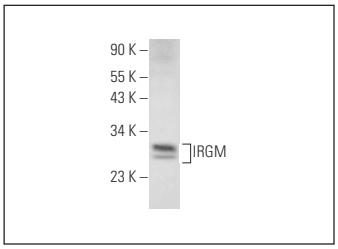
Molecular Weight of IRGM: 20 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182.

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



IRGM (S-14): sc-168202. Western blot analysis of IRGM expression in AML-193 whole cell lysate.

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 or our catalog for detailed protocols and support products.