

**AP30455PU-N****Polyclonal Antibody to IRGM / LRG-47 - Aff - Purified****Alternate names:**

IFI1, IRGM1, Immunity-related GTPase family M protein, Immunity-related GTPase family M protein 1, Interferon-inducible protein 1, LRG47

**Quantity:**

0.1 mg

**Background:**

Autophagy, the process of bulk degradation of cellular proteins through an autophagosomic-lysosomal pathway is important for normal growth control and may be defective in tumor cells. It is involved in the preservation of cellular nutrients under starvation conditions as well as the normal turnover of cytosolic components. Two of the strongest hits implicate genes IRGM and ATG16L1, which encode proteins thought to be critical to the autophagy pathway and being significantly associated with Crohn's disease. In mouse, IRGM belongs to a family of gamma-interferon-induced GTP-binding proteins of approximately 48 kDa. Murine IRGM induces autophagy and generates large autolysosomal organelles as a mechanism for the elimination of intracellular Mycobacterium tuberculosis. Human IRGM is also involved in autophagy and plays a role in the control of intracellular pathogens and in the reduction of intracellular bacillary load.

**Uniprot ID:**

[F8VPC9](#)

**NCBI:**

[AAI28169](#)

**GeneID:**

[84667](#)

**Host / Isotype:**

Rabbit / IgG

**Immunogen:**

IRGM antibody was raised against a 14 amino acid peptide near the center of the human IRGM.

**Format:**

**State:** Liquid Ig fraction

**Purification:** Peptide affinity chromatography

**Buffer System:** PBS containing 0.02% sodium azide

**Applications:**

ELISA:

Western blot: 1 – 2 µg/ml.

Immunohistochemistry on paraffin sections.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:**

This antibody detects IRGM at center.

**Add. Information:**

Blocking peptide available: AP30455CP-N

**Storage:**

Store at 2 - 8 °C for up to one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

**General Readings:**

1. Gozuacik D, Kimchi A. Autophagy as a cell death and tumor suppressor mechanism. *Oncogene*. 2004 Apr 12;23(16):2891-906. PubMed PMID: 15077152.

2. Massey DC, Parkes M. Genome-wide association scanning highlights two autophagy genes, ATG16L1 and IRGM, as being significantly associated with Crohn's disease. *Autophagy*. 2007 Nov-Dec;3(6):649-51. Epub 2007 Sep 24. PubMed PMID:

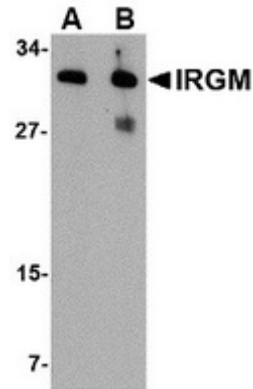
17921695.

3. Fisher SA, Tremelling M, Anderson CA, Gwilliam R, Bumpstead S, Prescott NJ, et al. Genetic determinants of ulcerative colitis include the ECM1 locus and five loci implicated in Crohn's disease. *Nat Genet.* 2008 Jun;40(6):710-2. doi: 10.1038/ng.145. Epub 2008 Apr 27. PubMed PMID: 18438406.

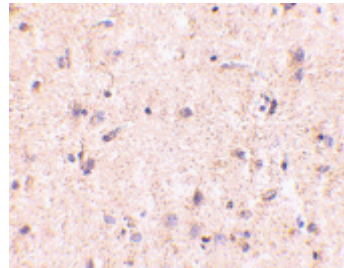
4. Singh SB, Davis AS, Taylor GA, Deretic V. Human IRGM induces autophagy to eliminate intracellular mycobacteria. *Science.* 2006 Sep 8;313(5792):1438-41. Epub 2006 Aug 3. PubMed PMID: 16888103.

**Pictures:**

Western blot analysis of IRGM in human brain lysate with IRGM antibody at (A) 1 and (B) 2 ug/ml.



Immunohistochemistry of IRGM in human brain with IRGM antibody at 5 ug/ml.



Immunofluorescence of IRGM in Human Brain tissue with IRGM antibody at 20 ug/mL.

