

IRGC Antibody

Catalog # ASC10955

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q6NXR0
Other Accession	NP_062558 , 10257429
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	50288
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	IRGC antibody can be used for detection of IRGC by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunocytochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	56269
Other Names	Interferon-inducible GTPase 5, 3.6.5., Immunity-related GTPase cinema 1, IRGC, IIGP5, IRGC1
Target/Specificity	IRGC; Two isoforms of IRGC are known to exist; this antibody will only recognize the IRGC α isoform.
Reconstitution & Storage	IRGC antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	IRGC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IRGC (HGNC:28835)
Synonyms	IIGP5, IRGC1
Function	GTPase required for sperm motility and therefore male fertility, via positive regulation of spermatozoa fibrous sheath formation.
Cellular Location	Cell projection, cilium, flagellum. Lipid droplet. Note=Expressed in the sperm mitochondrial sheath.

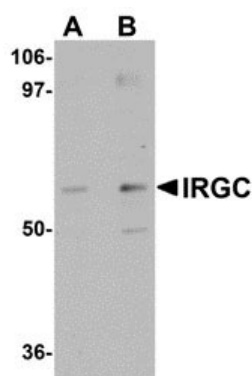
Background

IRGC Antibody: Immunity-related GTPases (IRG) (also known as p47 GTPases) are a family of GTPase proteins found in vertebrates, which play critical roles in mediating innate resistance to intracellular pathogens. IRG genes have been found in a number of mammals and lower species including mice, rats, zebrafish and humans. Most of the mouse genes contain interferon-stimulated response elements which mediate transcriptional activation by IFNs. In humans, only two IRG genes have been found: human IRGC encodes a full-length IRG protein that, like the mouse homologue, is constitutively expressed in testis, while human IRGM encodes a considerably truncated protein that is constitutively expressed in cultured cells including some macrophage cell lines. As the two human genes IRGC and IRGM are not subject to IFN control, it has been suggested that the host resistance mechanism supported by IRG proteins in the mouse is lacking in humans.

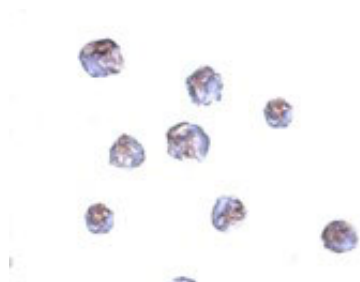
References

- Taylor GA. IRG proteins: key mediators of interferon-regulated host resistance to intracellular pathogens. *Cell Microbiol.*2007; 9:1099-107.
- Yamada K, Akimoto H, Ogawa Y, et al. Upregulation of immunity-related GTPase (IRG) proteins by TNF-alpha in murine astrocytes. *Biochem. Biophys. Res. Commun.*2009; 382:434-9.
- Singh SB, et al. Human IRGM induces autophagy to eliminate intracellular mycobacteria. *Science*2006; 313:1438-41.
- Bekpen C, Hunn JP, Rohde C, et al. The interferon-inducible p47 (IRG) GTPases in vertebrates: loss of the cell autonomous resistance mechanism in the human lineage. *Genome Biol.*2005; 6:R92.

Images

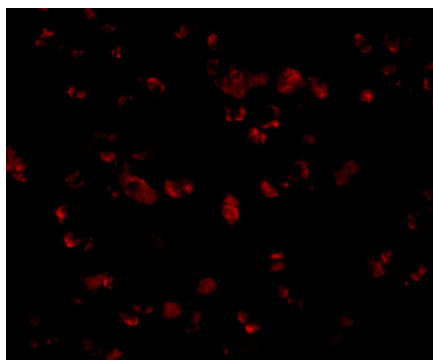


Western blot analysis of IRGC in A20 cell lysate with IRGC antibody at (A) 1 and (B) 2 $\mu\text{g/mL}$.



Immunocytochemistry of IRGC in A20 cells with IRGC antibody at 5 $\mu\text{g/mL}$.

Immunofluorescence of IRGCa in A20 cells with IRGCa antibody at 20 $\mu\text{g/mL}$.



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