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IFNAR1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8550c

Product Information

Application	WB, FC, IHC-P-Leica, E
Primary Accession	P17181
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21945
Calculated MW	63525
Antigen Region	162-188

Additional Information

Gene ID	3454
Other Names	Interferon alpha/beta receptor 1, IFN-R-1, IFN-alpha/beta receptor 1, Cytokine receptor class-II member 1, Cytokine receptor family 2 member 1, CRF2-1, Type I interferon receptor 1, IFNAR1, IFNAR
Target/Specificity	This IFNAR1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 162-188 amino acids of human IFNAR1.
Dilution	WB~~1:1000 FC~~1:25 IHC-P-Leica~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IFNAR1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

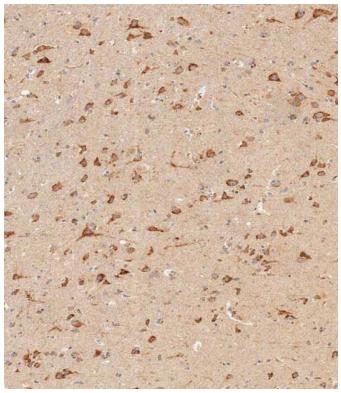
Name	IFNAR1
Synonyms	IFNAR

Function	Together with IFNAR2, forms the heterodimeric receptor for type I interferons (including interferons alpha, beta, epsilon, omega and kappa) (PubMed:10049744, PubMed:14532120, PubMed:15337770, PubMed:2153461, PubMed:21854986, PubMed:24075985, PubMed:31270247, PubMed:33252644, PubMed:35442418, PubMed:7813427). Type I interferon binding activates the JAK-STAT signaling cascade, resulting in transcriptional activation or repression of interferon-regulated genes that encode the effectors of the interferon response (PubMed:10049744, PubMed:21854986, PubMed:7665574). Mechanistically, type I interferon- binding brings the IFNAR1 and IFNAR2 subunits into close proximity with one another, driving their associated Janus kinases (JAKs) (TYK2 bound to IFNAR1 and JAK1 bound to IFNAR2) to cross-phosphorylate one another (PubMed:21854986, PubMed:32972995, PubMed:7665574, PubMed:7813427). The activated kinases phosphorylate specific tyrosine residues on the intracellular domains of IFNAR1 and IFNAR2, forming docking sites for the STAT transcription factors (PubMed:21854986, PubMed:32972995, PubMed:7526154, PubMed:7665574, PubMed:7813427). STAT proteins are then phosphorylated by the JAKs, promoting their translocation into the nucleus to regulate expression of interferon-regulated genes (PubMed:19561067, PubMed:21854986, PubMed:32972995, PubMed:7665574, PubMed:7813427, PubMed:9121453). Can also act independently of IFNAR2: form an active IFNB1 receptor by itself and activate a signaling cascade that does not involve activation of the JAK-STAT pathway (By similarity).
Cellular Location	[Isoform 1]: Cell membrane; Single-pass type I membrane protein. Late endosome. Lysosome. Note=Interferon binding triggers internalization of the receptor from the cell membrane into endosomes and then into lysosomes.
Tissue Location	IFN receptors are present in all tissues and even on the surface of most IFN-resistant cells. Isoform 1, isoform 2 and isoform 3 are expressed in the IFN-alpha sensitive myeloma cell line U266B1. Isoform 2 and isoform 3 are expressed in the IFN-alpha resistant myeloma cell line U266R. Isoform 1 is not expressed in IFN- alpha resistant myeloma cell line U266R.

Background

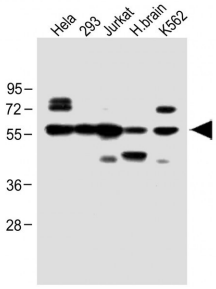
IFNAR1 is the receptor for interferons alpha and beta. Binding to type I IFNs triggers tyrosine phosphorylation of a number of proteins including JAKs, TYK2, STAT proteins and IFNR alpha-and beta-subunits themselves.

Images

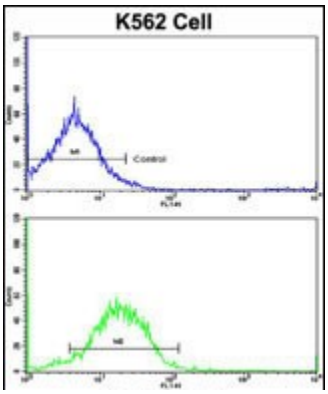


Immunohistochemical analysis of paraffin-embedded human brain tissue using AP8550C performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature; antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:1000) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

All lanes : Anti-IFNAR1 Antibody (Center) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: 293 whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: H. brain



whole cell lysate Lane 5: K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 64 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Flow cytometric analysis of K562 cells using IFNAR1 Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Function of multiple sclerosis-protective HLA class I alleles revealed by genome-wide protein-quantitative trait loci mapping of interferon signalling
- Resolving TYK2 locus genotype-to-phenotype differences in autoimmunity.