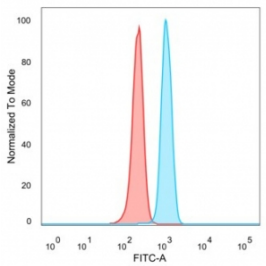
Interferon Regulatory Factor 3 Antibody / Antiviral Response Protein Antibody [clone PCRP-IRF3-4D7] (V4643)

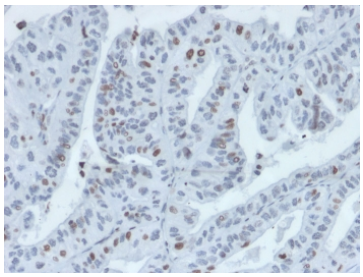
Catalog No.	Formulation	Size
V4643-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4643-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4643SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

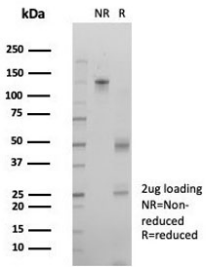
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1
Clone Name	PCRP-IRF3-4D7
Purity	Protein A/G affinity
UniProt	Q14653
Localization	Cytoplasm, Nucleus
Applications	Flow Cytometry : 1-2ug/million cells Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Interferon Regulatory Factor 3 Antibody / Antiviral Response Protein Antibody is available for research use only.



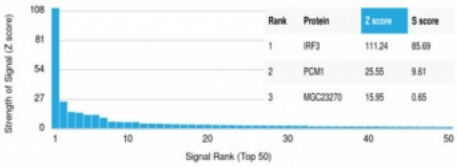
Interferon Regulatory Factor 3 Antibody HeLa FACS. Flow cytometry analysis of PFA-fixed human HeLa cells stained with Interferon Regulatory Factor 3 Antibody demonstrates a distinct right-shifted fluorescence population relative to unstained cells, consistent with IRF3-associated antiviral signaling and interferon regulatory pathway expression. This antiviral response protein antibody supports characterization of innate immune-associated transcriptional regulatory proteins in epithelial-derived cells. Blue=IRF3 antibody, Red=unstained cells.



Interferon Regulatory Factor 3 Antibody Tumor IHC. Immunohistochemistry analysis of FFPE human tumor tissue stained with Interferon Regulatory Factor 3 Antibody demonstrates predominantly nuclear HRP-DAB brown staining within malignant epithelial cell populations, consistent with activated IRF3-associated antiviral signaling and interferon-regulatory transcriptional pathway activity. This antiviral response protein antibody highlights innate immune-associated transcriptional regulation and stress-response signaling within tumor tissue. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free Interferon regulatory factor 3 antibody (clone PCRP-IRF3-4D7) as confirmation of integrity and purity.



Interferon Regulatory Factor 3 Antibody HuProt Microarray Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using Interferon Regulatory Factor 3 Antibody demonstrates highly selective recognition of IRF3 with strong separation from non-target proteins across the tested human proteome. These results support the high specificity of the PCRP-IRF3-4D7 mAb for interferon regulatory factor 3-associated antiviral signaling pathways and innate immune regulatory proteins. The Z-score represents the strength of antibody binding signal relative to the overall array mean, while the S-score reflects target specificity relative to the next highest ranked protein signal. The elevated S-score separation observed for IRF3 supports preferential target recognition across the tested human proteome.

Description

Interferon regulatory factor 3 (IRF3) is a transcription factor involved in antiviral response signaling, interferon-associated transcriptional regulation, innate immune activation, and pathogen sensing-associated cellular defense pathways. IRF3 functions downstream of cytoplasmic nucleic acid sensing pathways that regulate type I interferon production and inflammatory signaling responses following viral infection and cellular stress activation. Interferon Regulatory Factor 3 Antibody is useful for investigations involving antiviral signaling, interferon pathway activation, innate immune-associated regulation, and inflammatory cellular response biology.

Interferon regulatory factor 3 antibody, also referred to as IRF3 antibody, Antiviral response protein antibody, and Type I interferon signaling protein antibody in the literature, recognizes a predominantly cytoplasmic transcription factor encoded on chromosome 19q13.33. Upon activation through phosphorylation-dependent signaling pathways, IRF3 translocates to the nucleus where it regulates transcription of interferon-responsive genes and antiviral regulatory signaling networks. IRF3-associated signaling pathways are strongly linked to pathogen sensing, inflammatory activation, innate immune-associated cellular adaptation, and antiviral defense biology.

Interferon Regulatory Factor 3 Antibody / Antiviral Response Protein Antibody (clone PCRP-IRF3-4D7) is uniquely positioned for studies involving interferon-associated antiviral signaling and innate immune response biology. This mouse monoclonal antibody demonstrates strong immunohistochemical and flow cytometric detection together with highly selective HuProt(TM) microarray specificity validation against more than 19,000 full-length human proteins. The combined validation profile supports use of clone PCRP-IRF3-4D7 in investigations involving antiviral signaling pathways, inflammatory immune activation, and interferon-associated transcriptional regulation.

Analysis of HuProt(TM) microarrays containing more than 19,000 individually purified full-length human proteins

demonstrated highly selective recognition of IRF3 by clone PCRP-IRF3-4D7. In HuProt(TM) analysis, the Z-score represents the strength of antibody binding signal relative to the overall array mean, while the S-score reflects target specificity relative to the next highest ranked protein signal. Elevated S-score separation supports preferential target recognition and reduced off-target binding across the tested human proteome. This specificity validation strategy supports highly selective detection of interferon-associated signaling proteins in complex tissue systems.

IRF3 contributes directly to antiviral cellular defense through activation downstream of STING, MAVS, TBK1, and pattern recognition receptor-associated signaling pathways. Activated IRF3 regulates transcriptional programs associated with interferon production, inflammatory signaling, apoptosis-associated pathways, and antiviral cellular adaptation. Dysregulated IRF3-associated signaling has been linked to viral pathogenesis, autoimmune-associated inflammatory signaling abnormalities, chronic inflammatory disease, and tumor-associated immune regulatory pathways.

This Interferon Regulatory Factor 3 Antibody supports research involving antiviral response signaling, interferon-associated transcriptional regulation, innate immune activation pathways, pathogen sensing-associated signaling, inflammatory regulation, and stress-response-associated cellular adaptation. Clone PCRP-IRF3-4D7 may be incorporated into immunohistochemistry, flow cytometry, and tissue-based investigations examining antiviral signaling pathways in normal and diseased tissues.

For broader characterization of IRF3-associated innate immune signaling and interferon regulatory pathways, see our IRF3 Antibody / Innate Immune Signaling Antibody page featuring clone PCRP-IRF3-6C8 with WB, IF, FACS, and HuProt(TM) microarray specificity validation data.

Application Notes

Optimal dilution of the Interferon Regulatory Factor 3 Antibody / Antiviral Response Protein Antibody should be determined by the researcher.

Immunogen

Recombinant full-length human IRF3 protein was used as the immunogen for the Interferon regulatory factor 3 antibody.

Storage

Aliquot the Interferon regulatory factor 3 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Interferon regulatory factor 3 antibody, IRF3 antibody, Antiviral response protein antibody, Type I interferon signaling protein antibody, Interferon response transcription factor antibody, Innate immune response protein antibody