

Rabbit ISG15 Polyclonal Antibody | anti-ISG15 antibody

ISG15 Antibody

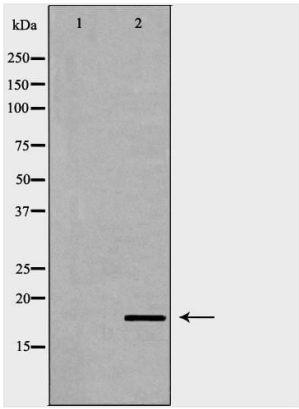
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326095	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

ISG15; Polyclonal Antibody; ISG15 Antibody; G1P2; hUCRP; IFI 15; IFI15; Interferon alpha inducible protein; Interferon induced protein 15; Interferon induced protein IFI-15K; Interferon stimulated protein 15 kDa; Interferon; alpha-inducible protein (clone IFI-15K); Interferon-induced 15 kDa protein; Interferon-induced 17 kDa protein; Interferon-induced 17-kDa/15-kDa protein; IP17; ISG 15; ISG15 ubiquitin like modifier; ISG15_HUMAN; Ubiquitin cross-reactive protein; Ubiquitin-like protein ISG15; UCRP; anti-ISG15 antibody

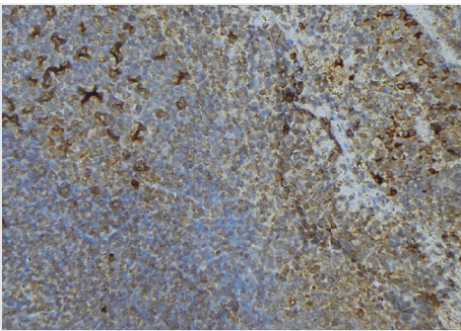
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	ISG15 antibody detects endogenous levels of total ISG15
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	165
Applicable Applications for anti-ISG15 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human ISG15
Subcellular Location	Cytoplasm. Secreted. UCRP conjugates seem to be noncovalently associated with the intermediate filaments and distributed in a punctate pattern. Also secreted.
Tissue Specificity	Detected in lymphoid cells, striated and smooth muscle, several epithelia and neurons. Expressed in neutrophils, monocytes and lymphocytes. Enhanced expression seen in pancreatic adenocarcinoma, endometrial cancer, and bladder cancer, as compared to non-cancerous tissue. In bladder cancer, the increase in expression exhibits a striking positive correlation with more advanced stages of the disease.
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Horse, Dog
Similarity	Pig (91%), Zebrafish (100%), Bovine (100%), Horse (100%), Dog (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



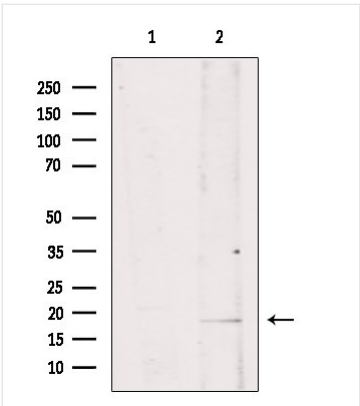
WB (Western Blot)

Western blot analysis of HepG2 cell lysate, using ISG15 Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326095 at 1/100 staining Human lymph node tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)

Western blot analysis of extracts from mouse brain, using ISG15 Antibody. Lane 1 was treated with the blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-ISG15 antibody	Description: Interferon-stimulated 15 kDa protein (ISG15), also known as ubiquitin cross-reactive protein (UCRP), is a member of the ubiquitin-like protein family and functions in various biological pathways from pregnancy to innate immune responses (1). Expression of ISG15 is stimulated by cellular exposure to type 1 interferons alpha and beta, in addition to infection with viruses such as influenza B (2, 3). After exposure to type I interferons, both lymphocytes and monocytes, in addition to some fibroblasts and epithelial cells, release ISG15 into culture medium (1, 4). ISG15 has been shown to function as a cytokine, stimulating interferon gamma secretion by monocytes and macrophages, proliferation of natural killer cells, and chemotactic responses in neutrophils (4, 5). ISG15 has also been shown to function intracellularly, being covalently conjugated to other proteins by E1 (Ube1L), E2 (UbcH8) and E3 ligases via a multi-step process analogous to ubiquitination (6, 7). ISG15 is removed from proteins by the ubiquitin processing protease Ubp43 (8). ISG15-protein conjugation (ISGylation) is induced by type 1 interferons, and target proteins include the serine protease inhibitor Serpin 2A, PLCgamma1, ERK1/2, Jak1 and Stat1 (9, 10). Unlike ubiquitination, ISGylation does not target proteins for degradation, rather ISGylation increases Jak1 and Stat1 activity, enhancing the cellular response to interferons (11). Function: Ubiquitin-like protein which plays a key role in the innate immune response to viral infection either via its conjugation to a target protein (ISGylation) or via its action as a free or unconjugated protein. ISGylation involves a cascade of enzymatic reactions involving E1, E2, and E3 enzymes which catalyze the conjugation of ISG15 to a lysine residue in the target protein. Its target proteins include IFIT1, MX1/MxA, PPM1B, UBE2L6, UBA7, CHMP5, CHMP2A, CHMP4B and CHMP6. Can also isgylate: EIF2AK2/PKR which results in its activation, DDX58/RIG-I which inhibits its function in antiviral signaling response, EIF4E2 which enhances its cap structure-binding activity and translation-inhibition activity, UBE2N and UBE2E1 which negatively regulates their activity, IRF3 which inhibits its ubiquitination and degradation and FLNB which prevents its ability to interact with the upstream activators of the JNK cascade thereby inhibiting IFNA-induced JNK signaling. Exhibits antiviral activity towards both DNA and RNA viruses, including influenza A, HIV-1 and Ebola virus. Restricts HIV-1 and ebola virus via disruption of viral budding. Inhibits the ubiquitination of HIV-1 Gag and host TSG101 and disrupts their interaction, thereby preventing assembly and release of virions from infected cells. Inhibits Ebola virus budding mediated by the VP40 protein by disrupting ubiquitin ligase activity of NEDD4 and its ability to ubiquitinate VP40. ISGylates influenza A virus NS1 protein which causes a loss of function of the protein and the inhibition of virus replication. The secreted form of ISG15 can: induce natural killer cell proliferation, act as a chemotactic factor for neutrophils and act as a IFN-gamma-inducing cytokine playing an essential role in antimycobacterial immunity. Subunit Structure: Homodimer; disulfide-linked. Interacts with, and is conjugated to its targets by the UBE1L (E1 enzyme) and UBE2E2 (E2 enzyme) (Probable). Interacts with NEDD4. Post-translational Modifications: S-nitrosylation decreases its dimerization, thereby increasing the availability as well as the solubility of monomeric ISG15 for its conjugation to cellular proteins. Induced as an inactive, precursor protein that is cleaved by specific proteases to expose the C-terminal diglycine (LRLRGG) motif. This motif is essential not only for its conjugation to substrates but also for its recognition by the relevant processing proteases. Similarity: Both the Ubiquitin-like 1 and Ubiquitin-like 2 domains are required for its efficient conjugation to cellular proteins. The two domains play different roles in the ISGylation pathway: Ubiquitin-like 2 domain is necessary for the first two steps allowing the linking of ISG15 to the E1 and E2 enzymes while Ubiquitin-like 1 domain is essential for the final, E3-mediated transfer of ISG15, from the E2 to the Lys of the target protein (PubMed:18356159).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4826774
NCBI GeneID	9636
NCBI Accession #	NP_005092.1
NCBI GenBank Nucleotide #	NM_005101.4
UniProt Accession #	P05161; Q5SVA4; Q7Z2G2; Q96GF0
Molecular Weight	Observed: 18 kDa Predicted: 18 kDa
NCBI Official Full Name	ubiquitin-like protein ISG15
NCBI Official Synonym Full Names	ISG15 ubiquitin-like modifier
NCBI Official Symbol	ISG15
NCBI Official Synonym Symbols	G1P2; IP17; UCRP; IFI15; IMD38; hUCRP

NCBI Protein Information	ubiquitin-like protein ISG15
UniProt Protein Name	Ubiquitin-like protein ISG15
UniProt Gene Name	ISG15
UniProt Synonym Gene Names	G1P2; UCRP; IP17; hUCRP

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/isg15-antibody-immunohistochemistry-western-blot-elisa/326095>