

## Product datasheet for R1195

### ISG15 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	This purified polyclonal antibody reacts with human ISG15 by ELISA and Western blot. This antibody using the specified conditions may recognize other prominent intrinsic bands (UBLs or conjugates). Other intrinsic bands are readily detectable at lower dilutions. An 18.5 kDa band corresponding to human ISG15 is detected. Most human cell lysates can be used as a positive control without induction or stimulation. Recommended dilutions: ELISA 1:2,000 - 1:10,000 Western blot 1:200 - 1:1,000. Although not tested, this antibody is likely functional in immunohistochemistry and immunoprecipitation.
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Recombinant human ISG15 protein
Specificity:	Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit Serum.
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2, containing 0.01% sodium azide State: Purified State: Lyophilized IgG fraction
Reconstitution Method:	Restore with 0.1 ml of deionized water or equivalent.
Concentration:	lot specific
Purification:	A multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated below
Conjugation:	Unconjugated



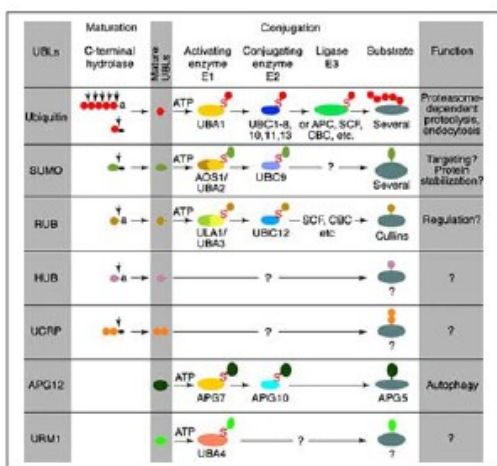
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<b>Storage:</b>	<p>Store vial at 2-8°C prior to restoration.</p> <p>Restore with deionized water (or equivalent); centrifuge product if not completely clear after standing at room temperature. This product is stable for one month at 2-8°C as an undiluted liquid.</p> <p>For extended storage aliquot contents and freeze at -20°C or below. Avoid cycles of freezing and thawing.</p> <p>Dilute only prior to immediate use.</p>
<b>Stability:</b>	<p>Shelf life: one year from despatch.</p>
<b>Gene Name:</b>	<p>ISG15 ubiquitin-like modifier</p>
<b>Database Link:</b>	<p><a href="#">Entrez Gene 9636 Human P05161</a></p>
<b>Background:</b>	<p>Ubiquitin-like proteins fall into two classes: the first class, ubiquitin-like modifiers (UBLs) function as modifiers in a manner analogous to that of ubiquitin. Examples of UBLs are SUMO, Rub1 (also called Nedd8), Apg8 and Apg12. Proteins of the second class include parkin, RAD23 and DSK2, are designated ubiquitin-domain proteins (UDPs). These proteins contain domains that are related to ubiquitin but are otherwise unrelated to each other. In contrast to UBLs, UDPs are not conjugated to other proteins. ISG15 (Interferon Stimulating Gene-15) shows no amino acid sequence homology to cytokines and is synthesized as a precursor that is activated through processing by a thiol protease. ISG15 is secreted by monocytes and lymphocytes. Synthesis is induced in response to IFN-<math>\alpha</math> or IFN-<math>\beta</math> or IFN-<math>\infty</math>, but not IFN-<math>\gamma</math>. ISG15 expression is induced also by overexpression of some interferon regulatory factors that have been shown to play a role in the transcriptional regulation of IFN genes. ISG15 is secreted also by cell lines of monocyte (U937 cell line), T-lymphocyte, B-lymphocyte (DAUDI cells), human fibroblasts, and epithelial origins. The induction of terminal differentiation in human melanoma cells is associated, among other things, with alterations in the expression of ISG15. Intracellularly ISG15 has been shown to function as a ubiquitin homologue. It is known also as UCRP (ubiquitin cross-reactive protein). Serpin 2a (spi2a), a member of the serine protease inhibitor (serpin) protein family that is highly induced in macrophages during bacillus Calmette-Guerin infection has been shown to bind ISG15. ISG15 has been shown to modulate immune cell function. It possesses activities of cytokines and induces production of IFN-<math>\gamma</math>. It enhances proliferation and functions of natural killer and LAK cells.</p>
<b>Synonyms:</b>	<p>UCRP</p>

Product images:



Immunoblot of hISG15 fusion protein. Anti-hISG15 antibody, generated by immunization with recombinant human ISG15, was tested by immunoblot against a hISG15-GFP fusion protein produced in E.coli cell lysate soluble fraction. Dilution of the antibody between 1:200 and 1:1,000 showed strong reactivity specifically with hISG15 and ISG15 coupled proteins. Free hISG15 is indicated by the arrowhead. In this blot the antibody was used at a 1:200 dilution incubated overnight at 4°C in 5% non-fat dry milk in TTBS. Detection occurred using a 1:2000 dilution of HRPlabeled Donkey anti-Rabbit IgG for 1 hour at room temperature. A chemiluminescence system was used for signal detection (Roche). Other detection systems will yield similar results. Data contributed by M.Malakhov, personal



Conjugation pathways for ubiquitin and ubiquitin like modifiers (UBLs). Most modifiers mature by proteolytic processing from inactive precursors (a; amino acid). Arrowheads point to the cleavage sites. Ubiquitin is expressed either as poly-ubiquitin or as a fusion with ribosomal proteins. Conjugation requires activating (E1) and conjugating (E2) enzymes that form thioesters (S) with the modifiers. Modification of cullins by RUB involves SCF (SKP1 / cullin-1 / Fbox protein) /CBC (cullin-2/elongin B/elonginC) -like E3 enzymes that are also involved in ubiquitination. In contrast to ubiquitin, the UBLs do not seem to form multi-UBL chains. UCRP (ISG15)resembles two ubiquitin moieties linked head-to-tail. Whether HUB1 functions as a modifier is currently unclear. APG12 and URM1 are distinct from the other modifiers because they are unrelated in sequence to ubiquitin. Data contributed by S.Jentsch, see references above.