

DESCRIPTION

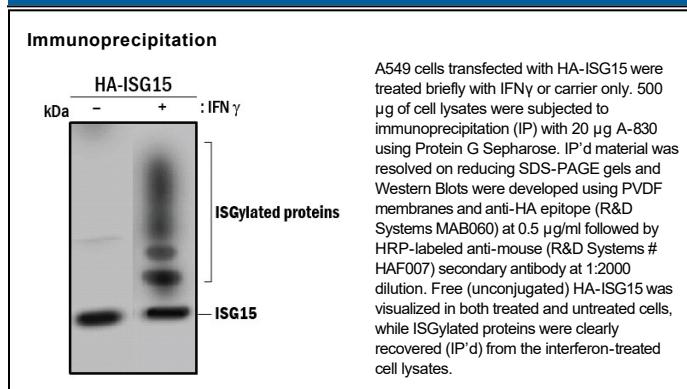
Species Reactivity	Human
Specificity	This antibody will recover ISGylated proteins in immunoprecipitation applications. This antibody detects ISGylated proteins in Western blots.
Source	Monoclonal Rat IgG _{2A} Clone # 851701
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Full-length recombinant human ISG15/UCRP Accession # P05161
Formulation	Supplied as a solution in PBS containing Glycerol and Sodium Azide. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.1-0.5 µg/mL	A549 cells transfected with HA-ISG15 treated with IFN-γ
Immunoprecipitation	Recommended IP conditions: use 10-20 µg of A-830 to recover ISGylated proteins from 0.5 – 1 mg of total protein in 1 ml of cellular lysate. Recommended concentration for Western Blot is 0.1 - 0.5 µg/ml.	

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C, as supplied. • 1 month, 2 to 8 °C under sterile conditions after opening. • 6 months, -20 to -70 °C under sterile conditions after opening.

BACKGROUND

Interferonstimulated Gene 15 (ISG15), also known as Ubiquitin Crossreacting Protein (UCRP), is a Ubiquitinlike protein that is covalently coupled to target proteins in a process termed ISGylation. It is a 165 amino acid (aa) polypeptide with a predicted molecular weight of 18 kDa. ISG15/UCRP exhibits 66% aa sequence identity with its mouse ortholog. Structurally, ISG15/UCRP consists of two tandem Ubiquitinlike domains that share a similar 3dimensional structure with Ubiquitin and other Ubiquitinlike modifiers including NEDD8 and SUMO1. Modification of targets by ISG15/UCRP occurs in a stepwise enzymatic process similar to that of Ubiquitin. Enzymes regulating ISGylation include the activating (E1) enzyme UBE1L, the conjugating (E2) enzyme UbcH8, and ligases (E3) such as HERC5. Removal of ISG15/UCRP is catalyzed by the deconjugating enzyme UBP43/USP18. Functionally, ISG15/UCRP has putative roles in the immune response and tumorigenesis. This is reflected by intracellular ISG15/UCRP targets that include Cyclin D1, tumor suppressor p63, IRF3, and a range of viral proteins. It is induced by type 1 interferons and microbial infection, and knockout mice exhibit an increased sensitivity to infection by some viruses. ISG15/UCRP can also be secreted by cells of the immune system and may act in a cytokinelike manner. For instance, it is produced by human granulocytes in response to mycobacterium exposure, and natural killer cells and T cells respond to extracellular ISG15/UCRP with IFNgamma production. Further supporting a role in immune function, ISG15/UCRP mutations are associated with MSMD, an inherited disorder characterized by increased susceptibility to mycobacterial infection.

PRODUCT SPECIFIC NOTICES

* Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to SDS for additional information and handling instructions.