Anti-ISG15 Antibody [JE32-27]

HA721264

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB
Molecular Wt:	Predicted band size: 18 kDa
Clone number:	JE32-27

Description: Interferon-stimulated gene 15 (ISG15) is a 17 kDA secreted protein that in humans is encoded by the ISG15 gene. ISG15 is induced by type I interferon (IFN) and serves many functions, acting both as an extracellular cytokine and an intracellular protein modifier. The precise functions are diverse and vary among species but include potentiation of Interferon gamma (IFN-II) production in lymphocytes, ubiquitin-like conjugation to newly-synthesized proteins and negative regulation of the IFN-I response. ISG15-deficiency is a very rare genetic disorder caused by mutations of the ISG15 gene. It is inherited with an autosomal recessive pattern and is classified as a primary immunodeficiency or inborn error of immunity. Patients present in childhood with infectious, neurologic or dermatologic features. Basal ganglia calcification is observed in all patients reported to date and represents the underlying autoinflammatory disease of excessive IFN-I activity, known as type I interferonopathy. The basal ganglia calcifications may cause epileptic seizures but often are asymptomatic. The IFN-I inflammation may also manifest early in life as ulcerative skin lesions in the armpit, groin and neck regions. Finally, ISG15-deficiency leads to mendelian susceptibility to mycobacterial disease, although with incomplete penetrance. These infections present as fistulizing lymphadenopathies and respiratory symptoms following BCG vaccination. In pancreatic ductal adenocarcinoma, tumor-associated macrophages secrete ISG15 enhancing the phenotype of cancer stem cells in the tumor.

Immunogen:	Recombinant full length protein of Human ISG15.
Positive control:	Hela treated with 10 ng/ml human IFN alpha 1 for 16 hours whole cell lysate.
Subcellular location:	Cytoplasm, Secreted.
Database links:	SwissProt: P05161 Human
Recommended Dilutions:	
WB	1:500
Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

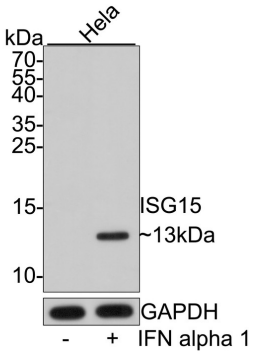

Fig1: Western blot analysis of ISG15 on different lysates with Rabbit anti-ISG15 antibody (HA721264) at 1/500 dilution.

Lane 1: Hela whole cell lysate
Lane 2: Hela treated with 10 ng/ml human IFN alpha 1 for 16 hours whole cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 18 kDa
Observed band size: 13 kDa

Exposure time: 2 minutes;

15% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721264) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

Background References

1. Mirzalieva O et al. ISG15 and ISGylation in Human Diseases. Cells. 2022 Feb
2. Freitas BT et al. How ISG15 combats viral infection. Virus Res. 2020 Sep