

Ubiquitin-like protein ISG15 Recombinant Protein | ISG15 recombinant protein

Recombinant Human Ubiquitin-like protein ISG15

CATALOG #
AAA81637

HOST
E Coli or Yeast or Baculovirus or Mammalian Cell

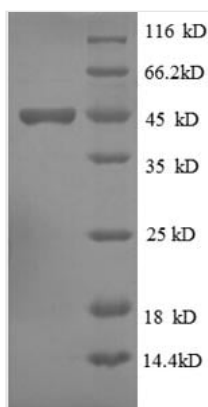
PRODUCT SYNONYMS

Ubiquitin-like protein ISG15; Recombinant Human Ubiquitin-like protein ISG15; Interferon-induced 15 kDa protein; Interferon-induced 17 kDa protein; IP17; Ubiquitin cross-reactive protein; ISG15 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	2-157. Full length.
Sequence	GWDLTVKMLA GNEFQVSLSS SMSVSELKAQ ITQKIGVHAF QQRLAVHPSG VALQDRVPLA SQGLGPGSTV LLVVDKCDEP LSILVRNNKG RSSTYEVRLT QTV AHLKQV SGLEGVQDDL FWLTFEGKPL EDQLPLGEYG LKPLSTVFMN LRLGG
Sequence Length	157
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for ISG15 recombinant protein	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 SERPINA3G/SPI2A, JAK1, MAPK3/ERK1, PLCG1, TRIM25, STAT5A, MAPK1/ERK2 and globin. Can also isgylate: DDX58/RIG-I which inhibits its function in antiviral signaling response and EIF4E2 which enhances its cap structure-binding activity and translation-inhibition activity. Exhibits antiviral activity towards both DNA and RNA viruses, including influenza A and B virus, sindbis virus (SV) and herpes simplex type-1 (HHV-1). Plays a significant role in the control of neonatal Chikungunya virus (CHIKV) infection by acting as a putative immunomodulator of proinflammatory cytokines. Protects mice against the consequences of Chikungunya virus infection by downregulating the pathogenic cytokine response, often denoted as the cytokine storm. Plays a role in erythroid differentiation. The secreted form of ISG15 can: induce natural killer cell proliferation, act as a chotactic factor for neutrophils and act as a IFN-gamma-inducing cytokine playing an essential role in antimycobacterial immunity
Product Categories/Family for ISG15 recombinant protein	Immunology
References	Nucleotide sequence and deduced amino acid sequence of a cDNA encoding an interferon-induced mouse 15-KDa protein.Fahey D. Sequence differences between murine ISG15, human ISG15 and ubiquitin a functional divergence from ubiquitin.Garlie N.K., Haas A.L., D'Cunha J., Schilling D., Knight E. Jr., Borden E.C. Serpin 2a is induced in activated macrophages and conjugates to a ubiquitin homolog.Hammerman J.A., Hayashi F., Schroeder L.A., Gygi S.P., Haas A.L., Hampson L., Coughlin P., Aebersold R., Aderem A.J. Immunol. 168:2415-2423(2002) Identification of a ubiquitin family protein as a novel neutrophil chemotactic factor.Owhashi M., Taoka Y., Ishii K., Nakazawa S., Uemura H., Kambara H.Biochem. Biophys. Res. Commun. 309:533-539(2003) High-throughput immunoblotting. Ubiquitin-like protein ISG15 modifies key regulators of signal transduction.Malakhov M.P., Kim K.I., Malakhova O.A., Jacobs B.S., Borden E.C., Zhang D.-E.J. Biol. Chem. 278:16608-16613(2003) Identification of interferon-stimulated gene 15 as an antiviral molecule during Sindbis virus infection in vivo.Lenschow D.J., Giannakopoulos N.V., Gunn L.J., Johnston C., O'Guin A.K., Schmidt R.E., Levine B., Virgin H.W. IVJ. Virol. 79:13974-13983(2005) Negative regulation of ISG15 E3 ligase EFP through its autoISGylation.Zou W., Wang J., Zhang D.-E.Biochem. Biophys. Res. Commun. 354:321-327(2007) ISG15 modification of the eIF4E cognate 4EHP enhances cap structure-binding activity of 4EHP.Okumura F., Zou W., Zhang D.E.Genes Dev. 21:255-260(2007) IFN-stimulated gene 15 functions as a critical antiviral molecule against influenza, herpes, and Sindbis viruses.Lenschow D.J., Lai C., Frias-Staheli N., Giannakopoulos N.V., Lutz A., Wolff T., Osiak A., Levine B., Schmidt R.E., Garcia-Sastre A., Leib D.A., Pekosz A., Knobeloch K.P., Horak I., Virgin H.W. IVProc. Natl. Acad. Sci. U.S.A. 104:1371-1376(2007) Nitrosylation of ISG15 prevents the disulfide bond-mediated dimerization of ISG15 and contributes to effective ISGylation.Okumura F., Lenschow D.J., Zhang D.E.J. Biol. Chem. 283:24484-24488(2008) Negative feedback regulation of RIG-I-mediated antiviral signaling by interferon-induced ISG15 conjugation.Kim M.J., Hwang S.Y., Imaizumi T., Yoo J.Y.J. Virol. 82:1474-1483(2008) Emerging role of ISG15 in antiviral immunity.Skaug B., Chen Z.J.Cell 143:187-190(2010) ISG15 modulates development of the erythroid lineage.Maragno A.L., Pironin M., Alcalde H., Cong X., Knobeloch K.P., Tangy F., Zhang D.E., Ghysdael J., Quang C.T.PLoS ONE 6:E26068-E26068(2011) ISG15 is critical in the control of Chikungunya virus infection independent of UbE1L mediated conjugation.Werneke S.W., Schilte C., Rohatgi A., Monte K.J., Michault A., Arenzana-Seisdedos F., Vanlandingham D.L., Higgs S., Fontanet A., Albert M.L., Lenschow D.J.PLoS Pathog. 7:E1002322-E1002322(2011) Mycobacterial disease and impaired IFN-gamma immunity in humans with inherited ISG15 deficiency.Bogunovic D., Byun M., Durfee L.A., Abhyankar A., Sanal O., Mansouri D., Salem S., Radovanovic I., Grant A.V., Adimi P., Mansouri N., Okada S., Bryant V.L., Kong X.F., Kreins A., Velez M.M., Boisson B., Khalilzadeh S., Ozcelik U., Darazam I.A., Schoggins J.W., Rice C.M., Al-Muhsen S., Behr M., Vogt G., Puel A., Bustamante J., Gros P., Huijbregtse J.M., Abel L., Boisson-Dupuis S., Casanova J.L.Science 337:1684-1688(2012)

NCBI AND UNIPROT INFORMATION

NCBI GI #	226874851
NCBI GeneID	100038882
NCBI Accession #	NP_056598.2
NCBI GenBank Nucleotide #	NM_015783.3
UniProt Accession #	Q64339; Q8K0H3
Molecular Weight	44.3 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; Irfp; UCRP; IGI15
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
UniProt Entry Name	ISG15_MOUSE

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://www.aaabiotech.com/isg15-recombinant-protein-e-coli/81637>