

For Research Use Only, Not for use in diagnostic procedures

Human ISG15

Human, recombinant protein expressed in *E. coli*.

Cat# CY-R2272

Amount: 100 µg (1 µg/µl x 100µl)
Lot:**Introduction:**

ISG15 (Interferon (IFN)-Stimulated Gene 15) is a ubiquitin-like protein containing two ubiquitin homology domains and becomes conjugated to a variety of proteins when cells are treated with type I interferon or lipopolysaccharide. Therefore this modification (so called, ISGylation) appear to be involved in type I interferon signal transduction. Unlike ubiquitylation, ISGylation does not drive protein degradation (regulated by K48-linked ubiquitin). ISG15 is expressed as a 165 amino acid precursor that is subsequently processed to expose the C-terminal sequence LRLRGG. Like ubiquitin, this C-terminal diglycine residue is adenylated and conjugated by a thiolester bond to sequential cysteine residues on the E1-activating, E2-carrier and E3-ligase enzymes, before being transferred to lysine residues on target protein substrates.

ISG15 can also be found extracellularly in an unconjugated form. Human lymphocytes and monocytes were reported to release free ISG15 following treatment with IFN-β. More than 50% of the total ISG15 could be detected in the culture medium 24 hours following IFN stimulation. In addition, ISG15 is highly elevated and extensively conjugated to cellular proteins in many tumors and tumor cell lines. The increased levels of ISG15 in tumor cells were found to be associated with decreased levels of polyubiquitinated proteins.

Product Description:

Full length of human ISG15, containing an N-terminal GST tag, expressed in *E. coli*. and purified by GSH agarose chromatography.

Gene Information:

The gene accession number is NM_005101

OMIM:

The OMIM ID number is *147571

Gene Aliases:

ISG15 (G1P2, IFI15)

Formulation:

Recombinant human ISG15 is supplied frozen in phosphate buffered saline (PBS) containing 10% glycerol.

For Research Use Only, Not for use in diagnostic procedures**Molecular Weight:** 42kDa**Mw (kDa)**

Recombinant human ISG15 demonstrates approximately 42kDa band by SDS-PAGE analysis. (CBB staining)

97 —

66 —

45 —

31 —

Purity is over 90% estimated by SDS-PAGE analysis.

Storage:

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, AVOID REPEATED HANDLING AND MULTIPLE FREEZE/THAW CYCLES.

Stability:

Unopened vial at -70°C, for 1 year after delivery.

References:

1. Korant BD, Blomstrom DC, Jonak GJ, Knight E, Jr (1984) J Biol Chem; 259: 14835–14839.
2. Blomstrom DC, Fahey D, Kutny R, Korant BD, Knight E Jr (1986) J Biol Chem 261: 8811–8816.
3. Haas AL, Ahrens P, Bright PM, Ankel H (1987) J Biol Chem 1987; 262: 11315–11323.
4. Feltham, N., Hillman, M., Jr., Cordova, B., Fahey, D., Larsen, B., Blomstrom, DC. & Knight, E., Jr. (1989) J. Interferon Res. 9: 493-507.
5. Knight, E Jr & B. Cordova (1991) J Immunol. 146: 2280-2284.
6. Loeb, K. L. & Haas, A. L. (1992) J. Biol. Chem. 267: 7806-7813.
7. D'Cunha, J, Knight E Jr, Haas A.L., Truitt R. L. & Borden EC. (1996) Proc Natl Acad Sci USA 93: 211-215
8. D'Cunha, J, Ramanujam S., Wagner R.J., Witt PL., Knight E. Jr. & Borden EC. (1996) J Immunol 157: 4100-4108.
9. Austin, K J, S. K. Ward, M. G. Teixeira, Dean VC., Moore DW. & Hansen TR. (1996) Biol Reprod 54: 600-606
10. Kelso A (1998) Immunol Cell Biol 76: 300-317
11. Durfee Larissa A., Lyon Nancy, Seo Kyungwoon, and Huibregtse Jon M. (2010) Mol Cell 38: 722-732.

For Research Use Only, Not for use in diagnostic procedures

Related Products

- * CircuLex Human ISG15 ELISA Kit: Cat# CY-8085
- * CircuLex Mouse ISG15 ELISA Kit: Cat# CY-8091

- * Human ISG15: Cat# CY-R2272
- * Mouse ISG15: Cat# CY-R2274

PRODUCED BY

CycLex Co., Ltd.
1063-103 Terasawaoka
Ina, Nagano 396-0002
Japan
Fax: +81-265-76-7618
e-mail: info@cyclex.co.jp
URL: <http://www.cyclex.co.jp>

CycLex/CircuLex products are supplied for research use only. CycLex/CircuLex products and components thereof may not be resold, modified for resale, or used to manufacture commercial products without prior written approval from CycLex Co., Ltd. To inquire about licensing for such commercial use, please contact us via email.