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Product datasheet for MR201242

Isg15 (NM_015783) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Isg15 (NM_015783) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Isg15
Synonyms:	100038882; G1p2; IGI15; IP17; Irfp; UCRP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR201242 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCTGGGACCTAAAGGTGAAGATGCTGGGGGGTAACGATTTCCTGGTGTCCGTGACTAACTCCATGA
CGGTGTCAGAACTGAAGAAGCAGATTGCCCAGAAGATTGGTGTGCCGGCTTTCCAGCAGCGCCTGGCCCA
CCAAACTGCAGTGCTCCAGGACGGTCTTACCCTTTCCAGTCTGGGTCTGGGTCCCAGCAGCACAGTGATG
CTAGTGGTACAGAACTGCAGCGAGCCTCTGAGCATCCTGGTGAGGAACGAAAGGGGCCACAGCAACATCT
ATGAGGTCTTTCTGACGCAGACTGTAGACACGCTTAAGAAGAAGGTGTCCCAGCGGGAACAAGTCCACGA
AGACCAGTTCTGGCTGAGCTTCGAGGGAAGGCCCATGGAGGACAAGGAGCTGCTGGGGGAGTATGGCCTA
AAGCCCCAGTGCACAGTGATCAAGCATTTGCGCCTGAGGGGTGGGGGAGGGGACCAGTGTGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR201242 protein sequence
Red=Cloning site Green=Tags(s)

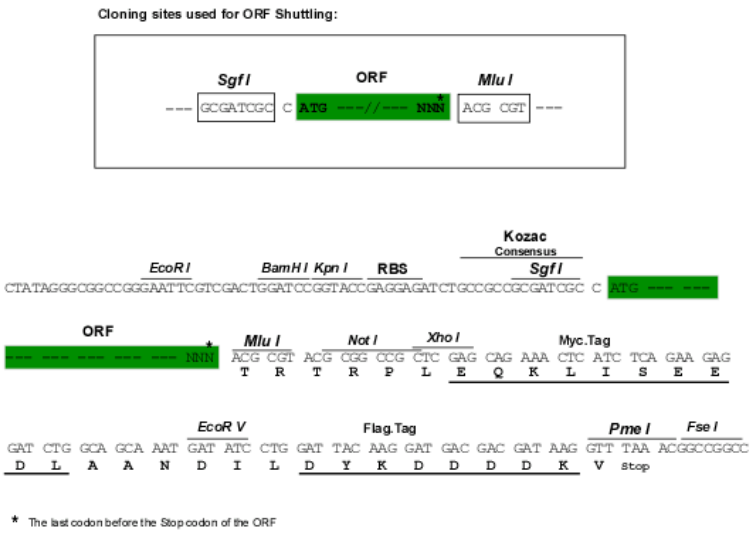
MAWDLKVKMLGGNDFLVSVTNSMTVSELKKQIAQKIGVPAFQQRLAHQTAVLQDGLTLSSLGLGPSSTVM
LVVQNCSEPLSILVRNERGHSNIYEVFLTQTVDTLKKKVSQREQVHEDQFWLSFEGRPMEDKELLGEYGL
KPQCTVIKHLRLRGGGGDQCA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

View online »

Cloning Scheme:



ACCN: NM_015783

ORF Size: 486 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: NM_015783.3, NP_056598.2

RefSeq Size: 756 bp

RefSeq ORF: 486 bp

Locus ID: 100038882

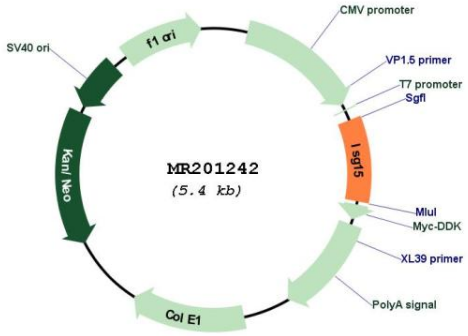
UniProt ID: Q64339

Cytogenetics: 4

MW: 17.9 kDa

Gene Summary: 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 chemotactic factor for neutrophils and act as a IFN-gamma-inducing cytokine playing an essential role in antimycobacterial immunity. The secreted form acts through the integrin ITGAL/ITGB2 receptor to initiate activation of SRC family tyrosine kinases including LYN, HCK and FGR which leads to secretion of IFNG and IL10; the interaction is mediated by ITGAL (By similarity). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR201242