

## Product datasheet for **MR207547**

### **Eif2s3y (NM\_012011) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Eif2s3y (NM_012011) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Eif2s3y
Synonyms:	Eif-2gy; Spy; Tfy
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR207547 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCGGGCGGAGAAGCCGGTGTCACTCTCGGGCAGCCGCATCTTCTCGTCAGGATCTTGCCACTTTGG  
 ATGTTACCAAGTTGACTCCGCTTTCACGTGAAATTATCAGCAGACAAGCCACAATTAATATAGGCACAAT  
 TGGTCATGTTGCTCATGAAAATCTACAGTTGTAAGCCATTTCTGGTGTTCACACTGTCCGATTCAAA  
 AATGAACTAGAAAAGGAATATTACCATAAACTGGATATGCTAATGCCAAAATTTATAAGCTTGATGACT  
 CAAGTTGTCTCGACCAGAATGTTACAGATCTTGTGGAAGTAGTACACCTGATGAGTTTCTTCAGATAT  
 TCCAGGGACCAAAGAACTTCAGACTAGTCAGACATGTTTCTTTGTTGATTGCCTGGTCATGATATT  
 TTGATGGCAACTATGCTGAATGGGCAGCAGTATGGATGCAGCTCTTCTGTTGATAGCTGGTAATGAAT  
 CTTGTCTCAACCTCAGACTTCTGAACACCTGGCTGCCATTGAAATTATGAAGCTAAAACATATTTTGAT  
 TCTGCAAAAATAAAATTGATTTGGTGAAGAAAGCCAGGCTAAAGAACAGTATGAACAGATACTTGCATTT  
 GTACAGGGTACAGTAGCCGAAGGAGCTCCTATTATTCCAATTTCTGCTCAGTTAAAAATACAAATTTGAAG  
 TTGATGTGAGTATATAGTAAAGAAAATCCAGTACCTCTAAGAGACTTTACTTCAGAACCCCGACTTAT  
 TGTATTCCGGTCTTTTGTATGTTAAACAACTGGCTGTGAAGTTGATGACCTTAAAGGGGGTGTAGCTGGT  
 GGTAGTATTTTAAAGGCGTATTAAAGTTGGGACAAGAGATAGAAGTGAGACCTGGTATTGTTTCTAAAG  
 ACGGAGAAGGGAAGCTTATGTGTAACCAATCTTTTCCAAGATTGATCCCTTTTTCAGAACACAATGA  
 TCTTCAGTATGCTGCTCCAGTGGTCTTATTGGAGTTGGAACAAAATGACCCAACGTTATGCCGAGCA  
 GATAGAATGGTTGGCAGGTCCTTGGTGTGTTGGAGCATTACCTGAGATTTACAGAGATTAGAAATTT  
 CCTACTTCTACTGAGACGGCTCCTAGGTGTACGTACAGAAGGAGACAAGAAAGCAGAAAAGTTCAAAA  
 GCTATCCAAGAATGAAGTACTCATGGTGAACATAGGGTCCTTGTCTACAGGAGGCAGAGTTAGTGCAGTC  
 AAGGCAGATTTGGTAAAATTGTTCTAACCAATCCAGTATGCACAGAAGTAGGAGAAAAAATTGCTCTAA  
 GCCGACGAGTTGAGAAACTGGCGTTTAAATTGGTTGGGGCCAGATAAGAAGAGGCGTACTATCAAGCC  
 AACAAATAGATGATGAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR207547 protein sequence  
 Red=Cloning site Green=Tags(s)

MAGGEAGVTLGQPHLSRQDLATLDVTKLTPLSREIISRQATINIGTIGHVAHGKSTVVKAISGVHTVRFK  
 NELERNITIKLGYANAKIYKLDSSCPRECYRSCGSSTPDEFPSDIPGKGNFRLVRHVSFVDCPGHDI  
 LMATMLNGAAVMDAALLLIAGNESCQPQTSEHLAAIEIMKLNKILILQNKIDLVKESQAKEQYEQILAF  
 VQGTVAEGAPIIPIISAQLKYNIEVVCEYIVKKIPVPLRDFSTSEPRILIVIRSFVKNKPGCEVDDLKGGVAG  
 GSILKGVLLKVGQEIIEVRPGIVSKDGEGLMCKPIFSKIVSLFAEHNDLQYAAPGGLIGVGTIDPTLCRA  
 DRMVGQVLGAVGALPEIFTELEISYFLLRRLGVRTEGDKKAQVQKLSKNEVLMVNIIGSLSTGGRVSAV  
 KADLGKIVLTNPVCTEVGEKIALSRRVEKHWRLLIGWQIRRGVTIKPTIDDE

**TR**TRPLEQ**KL**ISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_012011

**ORF Size:** 1419 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\\_012011.2](#)

**RefSeq Size:** 1801 bp

**RefSeq ORF:** 1419 bp

**Locus ID:** 26908

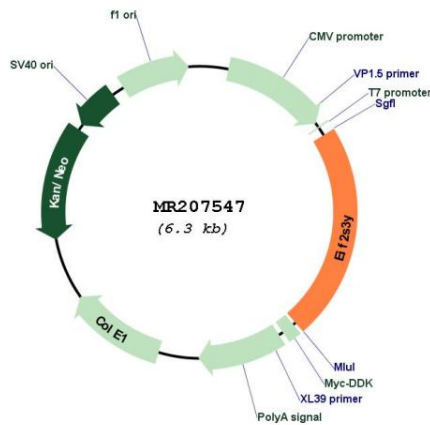
**UniProt ID:** [Q9Z0N2](#)

**Cytogenetics:** Ypter

**MW:** 51.1 kDa

**Gene Summary:** As a subunit of eukaryotic initiation factor 2 (eIF2), involved in the early steps of protein synthesis. In the presence of GTP, eIF2 forms a ternary complex with initiator tRNA Met-tRNAi and then recruits the 40S ribosomal complex, a step that determines the rate of protein translation. This step is followed by mRNA binding to form the 43S pre-initiation complex. Junction of the 60S ribosomal subunit to form the 80S initiation complex is preceded by hydrolysis of the GTP bound to eIF2 and release of an eIF2-GDP binary complex. In order for eIF2 to recycle and catalyze another round of initiation, the GDP bound to eIF2 must exchange with GTP by way of a reaction catalyzed by eIF2B (By similarity). Along with its paralog on chromosome X, may contribute to spermatogenesis up to the round spermatid stage (PubMed:26823431).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR207547