

## Product datasheet for **SC316720**

### eIF2 alpha (EIF2S1) (NM\_004094) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	eIF2 alpha (EIF2S1) (NM_004094) Human Untagged Clone
Tag:	Tag Free
Symbol:	eIF2 alpha
Synonyms:	EIF-2; EIF-2A; EIF-2alpha; EIF2; EIF2A
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF sequence for NM_004094 edited ATGCCGGTCTAAGTTGTAGATTTTATCAACACAAATTTCTGAGGTGGAAGATGTAGTG ATGGTGAATGTCAGATCCATTGCTGAAATGGGGCTTATGTCAGCTTGCTGGAATACAAC AACATTGAAGGCATGATTCTTCTTAGTGAATTATCCAGAAGGCGTATCCGTTCTATCAAC AAACTCATCCGAATTGGCAGGAATGAGTGTGTGTTGTCATTAGGTGGACAAAGAAAA GGATATATTGATTTGTCAAAAAGAAGAGTTTCTCCAGAGGAAGCAATCAAATGTGAAGAC AAATTCACAAAATCCAAAAGTGTATAGCATTCTTCGTCATGTTGCTGAGGTGTTAGAA TACACCAAGGATGAGCAGCTGGAAGCCTATTCCAGAGGACTGCCTGGGTCTTTGATGAC AAGTACAAGAGACCTGGATATGGTGCCTATGATGCATTTAAGCATGCAGTCTCAGACCA TCTATTTTGGATAGTTTAGATTTGAATGAAGATGAACGGGAAGTACTCATTAAATAATATT AATAGGCGCTTGACCCACAGGCTGTCAAATTCGAGCAGATATTGAAGTGGCTTGTAT GGTTATGAAGGCATTGATGCTGTAAAAGAAGCCCTAAGAGCAGGTTTGAATTGTTCTACA GAAAACATGCCCATTAAGATTAATCTAATAGCTCCTCCTCGGTATGTAATGACTACGACA ACCCTGGAGAGAACAGAAGGCCTTTCTGTCTCAGTCAAGCTATGGCTGTTATCAAAGAG AAGATTGAGGAAAAGAGGGGTGTGTTCAATGTTCAAATGGAGCCCAAAGTGGTCACAGAT ACAGATGAGACTGAACCTTGCGAGGCAGATGGAGAGGCTTGAAAGAGAAAAATGCCGAAGTG GATGGAGATGATGATGCAGAAGAAATGGAAGCCAAAGCTGAAGATTAA
Restriction Sites:	NotI-NotI
ACCN:	NM_004094
Insert Size:	3100 bp



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**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_004094.4](#), [NP\\_004085.1](#)

**RefSeq Size:** 4165 bp

**RefSeq ORF:** 948 bp

**Locus ID:** 1965

**UniProt ID:** [P05198](#)

**Cytogenetics:** 14q23.3

**Domains:** S1

**Gene Summary:** The translation initiation factor EIF2 catalyzes the first regulated step of protein synthesis initiation, promoting the binding of the initiator tRNA to 40S ribosomal subunits. Binding occurs as a ternary complex of methionyl-tRNA, EIF2, and GTP. EIF2 is composed of 3 nonidentical subunits, the 36-kD EIF2-alpha subunit (EIF2S1), the 38-kD EIF2-beta subunit (EIF2S2; MIM 603908), and the 52-kD EIF2-gamma subunit (EIF2S3; MIM 300161). The rate of formation of the ternary complex is modulated by the phosphorylation state of EIF2-alpha (Ernst et al., 1987 [PubMed 2948954]).[supplied by OMIM, Feb 2010]