

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:	<ol style="list-style-type: none">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_017798.2
RefSeq Size:	3277 bp
RefSeq ORF:	1680 bp
Locus ID:	54915
UniProt ID:	Q9BYI9
Cytogenetics:	20q13.33
MW:	60.9 kDa

Gene Summary:

Specifically recognizes and binds N6-methyladenosine (m6A)-containing mRNAs, and promotes mRNA translation efficiency (PubMed:24284625, PubMed:26046440, PubMed:26318451). M6A is a modification present at internal sites of mRNAs and some non-coding RNAs and plays a role in the efficiency of mRNA splicing, processing and stability (PubMed:24284625). Acts as a regulator of mRNA translation efficiency: promotes ribosome loading to m6A-containing mRNAs and interacts with translation initiation factors eIF3 (EIF3A or EIF3B) to facilitate translation initiation (PubMed:26046440). Required to facilitate learning and memory formation in the hippocampus by enhancing protein synthesis upon neuronal stimulation: in response to neuronal stimulation, binds to m6A-containing neuronal mRNAs, promoting their translation, thereby contributing to learning and memory (By similarity). Acts as a regulator of axon guidance by binding to m6A-containing ROBO3 transcripts, thereby promoting their translation (By similarity). Acts as a negative regulator of antigen cross-presentation in myeloid dendritic cells (By similarity). Acts by binding and promoting translation of m6A-containing transcripts encoding proteins involved in lysosomal degradation and phagosome maturation, leading to increased antigen degradation in myeloid dendritic cells (By similarity). In the context of tumorigenesis, negative regulation of antigen cross-presentation limits the anti-tumor response by reducing efficiency of tumor-antigen cross-presentation (By similarity).[UniProtKB/Swiss-Prot Function]