

Product datasheet for **RN207359**

Impact (NM_001012235) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Impact (NM_001012235) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Impact
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>RN207359 representing NM_001012235 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTGAAGTGAATCAGGGAGCAACCAGAGGCAGAATGAAGAAATCGAGGCAATGGCAGCCATTTATG
 GCGAGGAGTGGTGTGTCATTGATGAGGTTGCCAAATATTTGTATTAGAATCACTGACGACATGGATGA
 CCCAAATGGACACTTTGTTTACAGGTGATGTTACCAAGTGAGTACCCAGGTACAGCGCCACCTGTTTAT
 CAGCTGAATGCTCCTTGGCTGAAAGGGCAAGAACGCGCAGAATTAGCCAAGAGCCTTGAGGAGATCTATA
 TGAAGAACATTGGTGAAGTATTCTTTACCAGTGGGTGGAGAAAATAAGAGATGCCCTGATACAGAAATC
 TCAGATCACAGAGCCAGGCCAGATGAGAAGAAGAAAACCTGAAGAGGAAGAAGTTGAGGGTGAAGATGAC
 CCCATTCTAGAACACCCACCAGAAAATCCAGTTAAAACATGGGACCTCAAAATCAGTGAAAGTGCACCCAG
 AAGCGGAAGAATTGCCTCCAATTGCTCATGGTGTCTCTATCACAGACCGAAGGAGCACTTCCAGGCACA
 TTTGGCCCCTGTCGTCTGCATTGACCAGGTGAAGAAGTTCTTGCCAAGTTGTATGAGAATAAGAAGATC
 GCCAGTGCCACCCACAACATCTACGCCTACAGGATATACTGTGAGGATAAGCAGACCTTCTTGCAAGGACT
 CCGAAGATGATGGAGAAACAGCCGCGGGCGGCCCTTCTTACCTTATGGAGATTTTGAATGTGAAGAA
 TGTGATGGTGGTATCCCGCTGGTATGGAGGGATCCTGTTGGGACCTGATCGTTTCAACACATCAAC
 AACTGTGCCAGGAACATCCTGGTGGAGAAGAACTTCACAACTCCCCTGAGGAGTCAGCCAAGAGCTTTG
 GAAAGAAGAAAGTAAAAAGGACAAGAAGAAGGTGACCATTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	SgfI-MluI
ACCN:	NM_001012235
Insert Size:	954 bp


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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<u>NM_001012235.1, NP_001012235.1</u>
RefSeq Size:	3386 bp
RefSeq ORF:	954 bp
Locus ID:	497198
UniProt ID:	<u>Q5GFD9</u>
Cytogenetics:	18p13
Gene Summary:	Translational regulator that ensures constant high levels of translation upon a variety of stress conditions, such as amino acid starvation, UV-C irradiation, proteasome inhibitor treatment and glucose deprivation. Plays a role as a negative regulator of the EIF2AK4/GCN2 kinase activity; impairs GCN1-mediated EIF2AK4/GCN2 activation, and hence EIF2AK4/GCN2-mediated eIF-2-alpha phosphorylation and subsequent down-regulation of protein synthesis. May be required to regulate translation in specific neuronal cells under amino acid starvation conditions by preventing GCN2 activation and therefore ATF4 synthesis. Through its inhibitory action on EIF2AK4/GCN2, plays a role in differentiation of neuronal cells by stimulating neurite outgrowth.[UniProtKB/Swiss-Prot Function]