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Product datasheet for TL507260

Ago2 Mouse shRNA Plasmid (Locus ID 239528)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Ago2 Mouse shRNA Plasmid (Locus ID 239528)
Locus ID:	239528
Synonyms:	1110029L17Rik; 2310051F07Rik; AI225898; AL022874; AW546247; Eif2c2; ENSMUSG00000072493; Gerp95
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	Ago2 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 239528). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	BC128379, BC129922, NM_153178, NM_153178.1, NM_153178.2, NM_153178.3, NM_153178.4, BC023279, BC024857, BC056639, BC064741, BC096465
UniProt ID:	Q8CJG0

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Summary:

Required for RNA-mediated gene silencing (RNAi) by the RNA-induced silencing complex (RISC). The 'minimal RISC' appears to include AGO2 bound to a short guide RNA such as a microRNA (miRNA) or short interfering RNA (siRNA). These guide RNAs direct RISC to complementary mRNAs that are targets for RISC-mediated gene silencing. The precise mechanism of gene silencing depends on the degree of complementarity between the miRNA or siRNA and its target. Binding of RISC to a perfectly complementary mRNA generally results in silencing due to endonucleolytic cleavage of the mRNA specifically by AGO2. Binding of RISC to a partially complementary mRNA results in silencing through inhibition of translation, and this is independent of endonuclease activity. May inhibit translation initiation by binding to the 7-methylguanosine cap, thereby preventing the recruitment of the translation initiation factor eIF4-E. May also inhibit translation initiation via interaction with EIF6, which itself binds to the 60S ribosomal subunit and prevents its association with the 40S ribosomal subunit. The inhibition of translational initiation leads to the accumulation of the affected mRNA in cytoplasmic processing bodies (P-bodies), where mRNA degradation may subsequently occur. In some cases RISC-mediated translational repression is also observed for miRNAs that perfectly match the 3' untranslated region (3' UTR). Can also up-regulate the translation of specific mRNAs under certain growth conditions. Binds to the AU element of the 3' UTR of the TNF (TNF-alpha) mRNA and up-regulates translation under conditions of serum starvation. Also required for transcriptional gene silencing (TGS), in which short RNAs known as antigene RNAs or agRNAs direct the transcriptional repression of complementary promoter regions. Regulates lymphoid and erythroid development and function, and this is independent of endonuclease activity.[UniProtKB/Swiss-Prot Function]

shRNA Design:

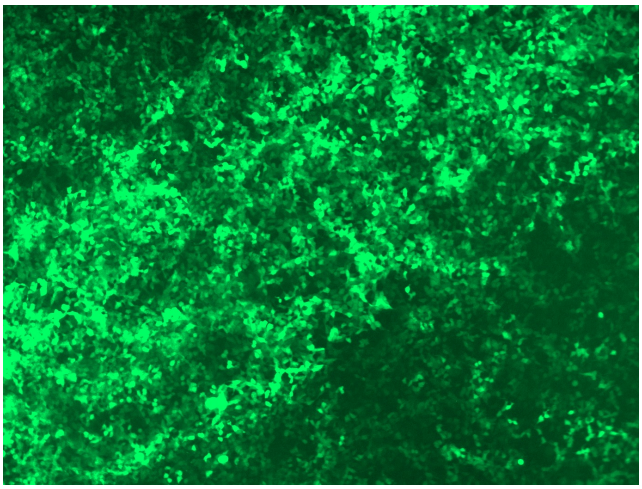
These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.

Performance Guaranteed:

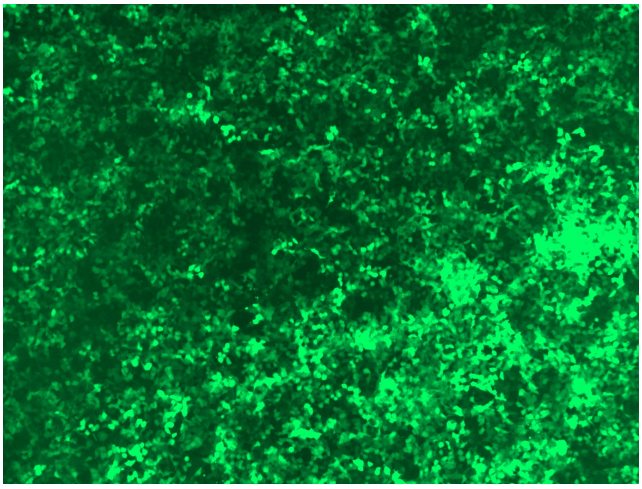
OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.

For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).

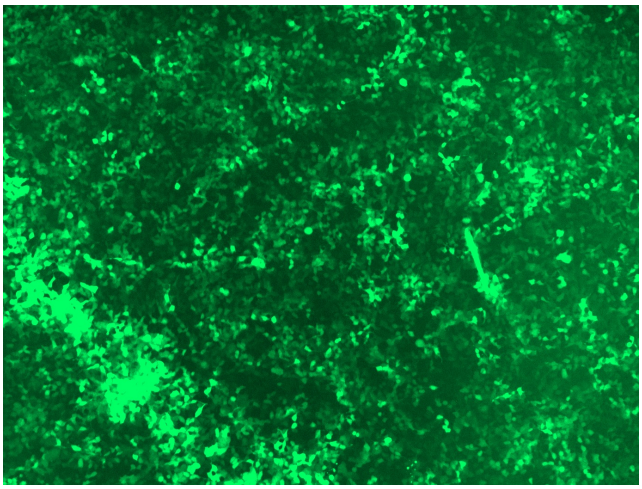
Product images:



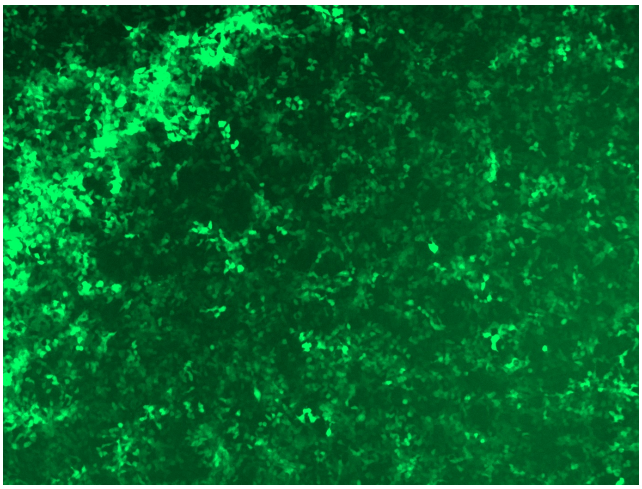
GFP signal was observed under microscope at 48 hours after transduction of TL507260A virus into HEK293 cells. TL507260A virus was prepared using lenti-shRNA TL507260A and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of TL507260B virus into HEK293 cells. TL507260B virus was prepared using lenti-shRNA TL507260B and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL507260C] virus into HEK293 cells. [TL507260C] virus was prepared using lenti-shRNA [TL507260C] and [TR30037] packaging kit.



GFP signal was observed under microscope at 48 hours after transduction of [TL507260D] virus into HEK293 cells. [TL507260D] virus was prepared using lenti-shRNA [TL507260D] and [TR30037] packaging kit.