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Product datasheet for TR510138

Atf5 Mouse shRNA Plasmid (Locus ID 107503)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Atf5 Mouse shRNA Plasmid (Locus ID 107503)
Locus ID:	107503
Synonyms:	AFTA; Atf7; Atfx; ODA-10
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	Atf5 - Mouse, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 107503). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	BC010195, BC092068, NM_030693, NR_033136, NM_030693.1, NM_030693.2
UniProt ID:	O70191

View online »

Summary:

Transcription factor that either stimulates or represses gene transcription through binding of different DNA regulatory elements such as cAMP response element (CRE) (consensus: 5'-GTGACGT[AC][AG]-3'), ATF5-specific response element (ARE) (consensus: 5'-C[CT]TCT[CT]CCTT[AT]-3') but also the amino acid response element (AARE), present in many viral and cellular promoters. Critically involved, often in a cell type-dependent manner, in cell survival, proliferation, and differentiation. Its transcriptional activity is enhanced by CCND3 and slightly inhibited by CDK4 (By similarity). Important regulator of the cerebral cortex formation, functions in cerebral cortical neuroprogenitor cells to maintain proliferation and to block differentiation into neurons. Must be down-regulated in order for such cells to exit the cycle and differentiate. Participates in the pathways by which SHH promotes cerebellar granule neuron progenitor cells proliferation (PubMed:22095825). Critical for survival of mature olfactory sensory neurons (OSN), directs expression of OSN-specific genes (PubMed:23090999). May be involved in osteogenic differentiation. Promotes cell proliferation and survival by inducing the expression of EGR1 sinergistically with ELK1. Once acetylated by EP300, binds to ARE sequences on target genes promoters, such as BCL2 and EGR1 (By similarity). Plays an anti-apoptotic role through the transcriptional regulation of BCL2, this function seems to be cell type-dependent (By similarity) (PubMed:12130540). Cooperates with NR1I3/CAR in the transcriptional activation of CYP2B6 in liver. In hepatic cells, represses CRE-dependent transcription and inhibits proliferation by blocking at G2/M phase. May act as a negative regulator of IL1B transduction pathway in liver. Upon IL1B stimulus, cooperates with NLK to activate the transactivation activity of C/EBP subfamily members. Besides its function of transcription factor, acts as a cofactor of CEBPB to activate CEBPA and promote adipocyte differentiation. Regulates centrosome dynamics in a cell-cycle- and centriole-age-dependent manner. Forms 9-foci symmetrical ring scaffold around the mother centriole to control centrosome function and the interaction between centrioles and pericentriolar material (By similarity).[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).