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Product datasheet for TR302279

Protein Kinase A regulatory subunit I alpha (PRKAR1A) Human shRNA Plasmid Kit (Locus ID 5573)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Protein Kinase A regulatory subunit I alpha (PRKAR1A) Human shRNA Plasmid Kit (Locus ID 5573)
Locus ID:	5573
Synonyms:	ACRDYS1; ADOHR; CAR; CNC; CNC1; PKR1; PPNAD1; PRKAR1; TSE1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	PRKAR1A - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 5573). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	NM_001276289, NM_001276290, NM_001278433, NM_002734, NM_212471, NM_212472, NM_002734.1, NM_002734.2, NM_002734.3, NM_002734.4, NM_212471.1, NM_212471.2, NM_212472.1, NM_212472.2, NM_001276289.1, NM_001276290.1, NM_001278433.1, BC036285, BC036285.1, BC093042, BC093042.1, BM928493, NM_001369389, NM_001369390, NM_002734.5
UniProt ID:	P10644

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Summary:

cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase, which transduces the signal through phosphorylation of different target proteins. The inactive kinase holoenzyme is a tetramer composed of two regulatory and two catalytic subunits. cAMP causes the dissociation of the inactive holoenzyme into a dimer of regulatory subunits bound to four cAMP and two free monomeric catalytic subunits. Four different regulatory subunits and three catalytic subunits have been identified in humans. This gene encodes one of the regulatory subunits. This protein was found to be a tissue-specific extinguisher that down-regulates the expression of seven liver genes in hepatoma x fibroblast hybrids. Mutations in this gene cause Carney complex (CNC). This gene can fuse to the RET protooncogene by gene rearrangement and form the thyroid tumor-specific chimeric oncogene known as PTC2. A nonconventional nuclear localization sequence (NLS) has been found for this protein which suggests a role in DNA replication via the protein serving as a nuclear transport protein for the second subunit of the Replication Factor C (RFC40). Several alternatively spliced transcript variants encoding two different isoforms have been observed. [provided by RefSeq, Jan 2013]

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).