

## Product datasheet for **TR308410**

### VPRBP (DCAF1) Human shRNA Plasmid Kit (Locus ID 9730)

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | shRNA Plasmids   |
| Product Name:             | VPRBP (DCAF1) Human shRNA Plasmid Kit (Locus ID 9730)  |
| Locus ID:                 | 9730   |
| Synonyms:                 | RIP; VPRBP   |
| Vector:                   | pRS (TR20003)  |
| E. coli Selection:        | Ampicillin   |
| Mammalian Cell Selection: | Puromycin  |
| Format:                   | Retroviral plasmids  |
| Components:               | DCAF1 - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 9730). 5µg purified plasmid DNA per construct<br>29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.   |
| RefSeq:                   | <a href="#">NM_001171904</a> , <a href="#">NM_014703</a> , <a href="#">NM_001349168</a> , <a href="#">NM_001349169</a> , <a href="#">NM_001349170</a> ,<br><a href="#">NM_001349171</a> , <a href="#">NR_146065</a> , <a href="#">NM_014703.1</a> , <a href="#">NM_014703.2</a> , <a href="#">NM_001171904.1</a> , <a href="#">BC110371</a> ,<br><a href="#">BC110371.1</a> , <a href="#">BC022792</a> , <a href="#">NM_014703.3</a> |
| UniProt ID:               | <a href="#">Q9Y4B6</a>   |



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**Summary:**

Acts both as a substrate recognition component of E3 ubiquitin-protein ligase complexes and as an atypical serine/threonine-protein kinase, playing key roles in various processes such as cell cycle, telomerase regulation and histone modification. Probable substrate-specific adapter of a DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complex, named CUL4A-RBX1-DDB1-DCAF1/VPRBP complex, which mediates ubiquitination and proteasome-dependent degradation of proteins such as NF2. Involved in the turnover of methylated proteins: recognizes and binds methylated proteins via its chromo domain, leading to ubiquitination of target proteins by the RBX1-DDB1-DCAF1/VPRBP complex (PubMed:23063525). The CUL4A-RBX1-DDB1-DCAF1/VPRBP complex is also involved in B-cell development: DCAF1 is recruited by RAG1 to ubiquitinate proteins, leading to limit error-prone repair during V(D)J recombination. Also part of the EDVP complex, an E3 ligase complex that mediates ubiquitination of proteins such as TERT, leading to TERT degradation and telomerase inhibition (PubMed:23362280). Also acts as an atypical serine/threonine-protein kinase that specifically mediates phosphorylation of 'Thr-120' of histone H2A (H2AT120ph) in a nucleosomal context, thereby repressing transcription. H2AT120ph is present in the regulatory region of many tumor suppressor genes, down-regulates their transcription and is present at high level in a number of tumors (PubMed:24140421). Involved in JNK-mediated apoptosis during cell competition process via its interaction with LLGL1 and LLGL2 (PubMed:20644714).[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](mailto: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](mailto: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).