

Datasheet for ABIN3728225

## Human MCL1 shRNA in Retroviral Vector (GFP tag)

### 4 Publications

#### Overview

Quantity:	1 kit
Gene:	MCL-1 (MCL1)
Species:	Human
Fusion tag:	GFP tag
Insert:	shRNA
Vector:	Retroviral Vector
Application:	RNA Interference (RNAi)

#### Product Details

Purpose:	Pre-designed Hush-29 shRNAs in viral vectors with proven effectiveness for knock-down of Human MCL1.
Brand:	HuSH-29™
Vector Backbone:	pGFP-V-RS
Promoter:	U6 Promoter
Selectable Marker:	Puromycin
Bacterial Resistance:	Kanamycin
Expression Type:	Transient, Stable
Specificity:	<ul style="list-style-type: none"> <li>The HuSH shRNA gene-specific expression cassettes were optimized to include both the termination signal for RNA Pol III and GC content targeted at 50 % to further improve the quality of the gene-specific shRNA expression vectors.</li> <li>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.</li> </ul>

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## Product Details

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- Characteristics:
- The shRNA gene-specific expression cassettes are prepared using synthetic oligonucleotides.
  - These oligonucleotide sequences were computer designed for optimal suppression of gene expression and minimal off-target effects.
  - All shRNA sequences are verified through DNA sequencing analysis.

- Components:
- Gene-specific shRNA in pGFPC-shLenti vector, 4 unique constructs per gene, 5 ug per vial.
  - HuSH 29-mer Scrambled in pGFP-C-shLenti 5 ug plasmid DNA.

## Target Details

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- Gene: MCL-1 (MCL1)
- Alternative Name: MCL1 ([MCL1 Products](#))

## Application Details

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- Application Notes:
- 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..

- Restrictions: For Research Use only

## Handling

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- Format: Lyophilized
- Storage: 4 °C/-20 °C
- Storage Comment: The dried plasmids can be stored at 4°C. However, once reconstituted with dH2O, the plasmids must be stored at -20°C.

## Publications

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Product cited in: Nolan, Walter, Tuffy, Poeschel, Gallagher, Haunsberger, Bray, Stallings, Concannon, Prehn: "Endoplasmic reticulum stress-mediated upregulation of miR-29a enhances sensitivity to neuronal apoptosis." in: **The European journal of neuroscience**, Vol. 43, Issue 5, pp. 640-52, (2016) ([PubMed](#)).

Murphy, Weyhenmeyer, Noonan, Kilbride, Schimansky, Loh, Kögel, Letai, Prehn, Murphy: "Modulation of Mcl-1 sensitizes glioblastoma to TRAIL-induced apoptosis." in: **Apoptosis : an**

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**international journal on programmed cell death**, Vol. 19, Issue 4, pp. 629-42, (2014) ([PubMed](#)).

Jane, Premkumar, DiDomenico, Hu, Cheng, Pollack: "YM-155 potentiates the effect of ABT-737 in malignant human glioma cells via survivin and Mcl-1 downregulation in an EGFR-dependent context." in: **Molecular cancer therapeutics**, Vol. 12, Issue 3, pp. 326-38, (2013) ([PubMed](#)).

Premkumar, Jane, Foster, Pollack et al.: "Survivin inhibitor YM-155 sensitizes tumor necrosis factor- related apoptosis-inducing ligand-resistant glioma cells to apoptosis through Mcl-1 downregulation and by engaging the mitochondrial death ..." in: **The Journal of pharmacology and experimental therapeutics**, Vol. 346, Issue 2, pp. 201-10, (2013) ([PubMed](#)).