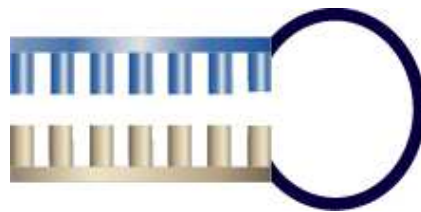


shRNA Luciferase

Instruction Manual

shRNA Luciferase is an original purified short hairpin RNA design specifically for gene silencing.

shRNA biologically processed by fermentation of genetically modified yeast cells, fractionation, extraction and purification



List of **shRNA**

Catalog Number	Description	Content ¹
SH10001	shRNA GFP	5 nmoles
SH10002	shRNA Luciferase	5 nmoles
SH10012	shRNA GFP + shRNA Luciferase	2 x 5 nmoles

¹ All reagents contains one tube of 1.5 mL nuclease free water.

Use the content of the table above to determine the appropriate catalog number for your needs. You can order these products by contacting us (telephone, fax, mail, e-mail) or directly through our website. For all other supplementary information, do not hesitate to contact our dedicated technical support: tech@ozbiosciences.com.

OZ BIOSCIENCES

Parc Scientifique et Technologique de Luminy
Batiment grand luminy – zone entreprise case 922
13288 Marseille cedex 09
Tel: +33 (0) 486 948 516
Fax: +33 (0) 486 948 515

E-mail: contact@ozbiosciences.com Web Site: www.ozbiosciences.com



Product Description and Content

Catalog Number:	SH10002
Kit Content:	1 x 5 nmol shRNA Luciferase Control 1 x 1.5 mL Nuclease-free Water
Appearance:	Dried powder (lyophilized)
µg / tube:	85 µg
nmol / tube:	5 nmol
Molecular Weight:	16907 g/mol
shRNA Purity:	HPLC purified (>98%)
RNase Activity:	None
Target Sequence:	Confidential

User Information

Short hairpins RNA (shRNA) are matured in siRNA, which induce gene silencing. OZ Biosciences shRNA are biologically processed by fermentation of genetically modified yeast cells, fractionation, extraction and purification. The shRNA Luciferase sequence (52 nucleotides) is small non synthetic RNA duplexes. This shRNA provided is pure ribonucleic acids and are not plasmid DNA or viral vectors encoding for shRNA. They are ideal for gene silencing assays due to their high stability (hairpin) versus siRNA, purity (>98%) and homogeneity (same length, same sequence, number of double strand higher than with siRNA). In this way, off-target effects are minimized. Their sequence and specificity has been validated. In addition, they do not content any synthetic chemical contaminants and due to their unique biological manufacturing process all batches produced are identical.

They are perfect for developing and optimizing transfection conditions. They can also be used as a control in gene silencing experiments. shRNA are susceptible to degradation by exogenous ribonucleases introduced during handling. As a precaution, gloves must be worn during shRNA handling. RNase-free reagents, plastic wares and any other equipment or consumables should be used.

Biologically produced and highly purified shRNA main features are:

1. High stability versus siRNA.
2. Great purity (>98%) and absence of chemical product contaminants.
3. Unique homogeneity: same length, same sequence, high number of double strand, reproducible batches
4. Avoid off-target effects
5. Strongly specific and validated sequence
6. Ready to use

Storage / Stability

- Dried shRNA are shipped at ambient temperature and should be store at -20°C. The lyophilized shRNA is stable for at least one year at the recommended storage temperature.
- The diluted shRNA solution must be kept at -80°C. The shRNA solution is stable for at least six months at the recommended storage temperature.

Usage

Preparing the shRNA solution

Always work in RNase free environment.

1. Briefly centrifuge the tube to pellet the lyophilized shRNA.
2. Add 50 µL of the Nuclease-free Water provided to the shRNA in order to obtain a final stock concentration of 100 µM.

3. Store the shRNA stock solution at -80°C. Repeated freeze-thaw cycles will not interfere with the shRNA sample as long as RNase-free conditions are strictly maintained.

Once diluted in Nuclease-free Water, the shRNA is ready to transfect and can be used at any final concentration depending on your needs.

General Transfection Starting Points

To assess shRNA-mediated gene silencing experiments effectively, we recommend using suitable shRNA controls (such as shRNA GFP) and efficient transfection reagents such as Lullaby or SilenceMag transfection reagents (www.ozbiosciences.com).

The gene knock down efficiency is depending on the cell types and the transfection reagents used. Thus, optimal shRNA concentration used for transfection should be determined empirically. We have typically experienced that best concentration ranged from 10 to 50 nM.

Culture Dishes	96 well	24 well	12 well	6 well
shRNA (pmol)	5	25	50	75

For transfection procedures and experimental conditions, we recommend following transfection reagent manufacturer's instructions.

Quality Controls

To guarantee the performance of **shRNA Luciferase** produced, we qualify each lot using rigorous standards.

Components	Standard Quality Controls
shRNA Quantity, Purity and Homogeneity	<ol style="list-style-type: none"> 1. Analyze by spectrophotometer: absorbance spectrum from 220-340 nm to monitor absence of solvent contaminants and quantification of RNA 2. Analyze by Experion™ assay. Capillary RNA analysis for size and purity 3. The degree of purity is analyzed by analytical HPLC
shRNA sequence	<ol style="list-style-type: none"> 1. Validation of the RNA by sequencing
shRNA RNase free	<ol style="list-style-type: none"> 1. Absence of RNase activity is monitored with an RNase detection kit
shRNA endotoxin	<ol style="list-style-type: none"> 1. Test colorimetric LAL
shRNA sterility	<ol style="list-style-type: none"> 1. Sterility. Thioglycolate assay. Absence of fungal and bacterial contamination shall be obtained for 7 days
shRNA biological activity	<ol style="list-style-type: none"> 1. Gene silencing efficacies in Luciferase stably transfected HeLa cells. Transfection with Lullaby siRNA transfection reagent. Every lot shall have an acceptance specification of > 80% of the activity of the reference lot

Description
MAGNETOFECTION TECHNOLOGY
Super Magnetic Plate (<i>standard size for all cell culture support</i>)
Mega Magnetic plate (<i>mega size to hold 4 culture dishes at one time</i>)
Transfection reagents:
PolyMag Neo (<i>for all nucleic acids</i>)
SilenceMag (<i>for siRNA application</i>)
NeuroMag (<i>dedicated for neurons</i>)
Transfection enhancer:
CombiMag (<i>to improve any transfection reagent efficiency</i>)
Viral Transduction enhancers:
ViroMag (<i>to optimize viral transduction</i>)
ViroMag R/L (<i>specific for retrovirus and Lentivirus</i>)
AdenoMag (<i>for Adeno viruses</i>)
LIPOFECTION TECHNOLOGY (LIPID-BASED)
Lullaby (<i>siRNA transfection reagent</i>)
DreamFect Gold (<i>Transfection reagent for all types of nucleic acids</i>)
Ecotransfect (<i>Economical reagent for routine transfection</i>)
FlyFectin (<i>for Insect cells</i>)
VeroFect (<i>for Vero cells</i>)
3D TRANSFECTION TECHNOLOGY
3Dfect (<i>for scaffolds culture</i>)
3DfectIN (<i>for hydrogels culture</i>)
RECOMBINANT PROTEIN PRODUCTION
HYPE-5 Transfection Kit (<i>for High Yield Protein Expression</i>)
PROTEIN DELIVERY SYSTEMS
Ab-DeliverIN (<i>delivery reagent for antibodies</i>)
Pro-DeliverIN (<i>delivery reagent for protein in vivo and in vitro</i>)
PLASMIDS PVECTOZ
pVectOZ-LacZ 25µg
pVectOZ-SEAP 25µg
ASSAY KITS
Bradford – Protein Assay Kit
β-Galactosidase assay kits (CPRG/ONPG)
X-Gal Staining Kit
BIOCHEMICALS
D-Luciferin, K ⁺ and Na ⁺ 1g
G-418, Sulfate 1g
X-Gal powder 1g

Please, feel free to contact us for all complementary information and remember to visit our website (www.ozbiosciences.com) to stay informed on the latest breakthrough technologies and product updates.

Purchaser Notification

Limited License

The purchase of **OZ Biosciences shRNA** and all included items grants the purchaser a non-transferable, non-exclusive license to use the kit and/or its separate and included components (as listed hereabove). This reagent is intended **for in-house research only** by the buyer. Such use is limited to the applications described in the product manual. In addition, "research only use" means that this kit and all of its contents are excluded, without limitation, from resale, repackaging, or use for the making or selling of any commercial product or service without the written approval of OZ Biosciences.

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Product Use Limitations

The shRNA reagent and all of its components are developed, designed, intended, and sold for research use only. They are not to be used for human diagnostic or included/used in any drug intended for human use. All care and attention should be exercised in the use of the kit components by following proper research laboratory practices.

For more information, or for any comments on the terms and conditions of this License, please contact:

Director of Business Development

OZ Biosciences

Parc Scientifique et Technologique de Luminy

Bâtiment Grand Luminy technopole

Case 922 zone entreprises

13288 Marseille Cedex 9, France

Tel: +33 (0)4.86.94.85.16

Fax: +33 (0)4.86.94.85.15

E-mail: contact@ozbiosciences.com

TO CONTACT US

Commercial inquiries:
contact@ozbiosciences.com

Orders:
order@ozbiosciences.com

Technical questions and information:
tech@ozbiosciences.com

Business inquiries:
business@ozbiosciences.com

By phone: +33 (0) 486 948 516

By fax: + 33 (0) 486 948 515