

siRNA Transfection Reagent: sc-29528

PRODUCT

siRNA Transfection Reagent is a highly efficient reagent for siRNA delivery with minimal cellular damage. Sufficient reagent supplied for 50-100 transfections (for 12 well plate); 0.3 ml. Store at 4° C; DO NOT FREEZE; protect from light.

GENERAL PRODUCT INFORMATION

To the best of our knowledge, this material is not believed to be toxic, hazardous or dangerous to one's health according to OSHA regulations. Follow appropriate guidelines for proper laboratory precautions and procedures when handling product. Wear appropriate protective clothing to limit exposure to eyes, skin and mucous membranes, as irritation may occur while using dry powders or liquid media. Wash hands thoroughly after using this product. This information is believed to be accurate and represents the best information available to date. We make no warranty or assume liability from its use. Users should make their own investigations to determine the suitability of the information.

siRNA MEDIATED INHIBITION OF GENE EXPRESSION

- In a six well tissue culture plate, seed 2×10^5 cells per well in 2 ml antibiotic-free normal growth medium supplemented with FBS.

NOTE: This protocol is recommended for a well from a 6 well tissue culture plate. Adjust cell and reagent amounts proportionately for wells or dishes of different sizes.

- Incubate the cells at 37° C in a CO₂ incubator until the cells are 60-80% confluent. This will usually take 18-24 hours.

NOTE: Healthy and subconfluent cells are required for successful transfection experiments. It is recommended to ensure cell viability one day prior to transfection.

- Prepare the following solutions:

Solution A: For each transfection, dilute 2-8 µl of siRNA duplex (i.e. 0.25-1 µg or 20-80 pmols siRNA) into 100 µl siRNA Transfection Medium: sc-36868.

Solution B: For each transfection, dilute 2-8 µl of siRNA Transfection Reagent: sc-29528 into 100 µl siRNA Transfection Medium: sc-36868. Peak activity should be at about 6 µl siRNA Transfection Reagent.

NOTE: Do not add serum and antibiotics to the siRNA Transfection Medium: sc-36868.

NOTE: Optimal siRNA amount used for transfection may vary for each target protein and should be determined experimentally.

NOTE: If a lower siRNA concentration is desired, dilute siRNA appropriately with siRNA Dilution Buffer: sc-29527.

NOTE: Although highly efficient in a variety of cell lines, siRNA Transfection Reagent: sc-29528 may not be suitable for use with all cell lines.

- Add the siRNA duplex solution (Solution A) directly to the dilute Transfection Reagent (Solution B) using a pipette. Mix gently by pipetting the solution up and down and incubate the mixture 15-45 minutes at room temperature.

- Wash the cells once with 2 ml of siRNA Transfection Medium: sc-36868. Aspirate the medium and proceed immediately to the next step.
- For each transfection, add 0.8 ml siRNA Transfection Medium to each tube containing the siRNA: Transfection reagent mixture. Mix gently and overlay the mixture onto the washed cells.
- Incubate the cells 5-7 hours at 37° C in a CO₂ incubator.

NOTE: Longer transfection times may be desirable depending on the cell line. However prolonged serum starvation may result in unwanted cell detachment or death.

- Add 1 ml of normal growth medium containing 2 times the normal serum and antibiotics concentration (2x normal growth medium) without removing the transfection mixture. If toxicity is a problem, remove the transfection mixture and replace with 1x normal growth medium.
- Incubate the cells for an additional 18-24 hours.
- Aspirate the medium and replace with fresh 1x normal growth medium.
- Assay the cells using the appropriate protocol 24-72 hours after the addition of fresh medium in the step above.

NOTE: Controls should always be included in siRNA experiments. Use either Control siRNAs: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 or sc-44238 or Control siRNA (Fluorescein Conjugates): sc-36869, sc-44239, sc-44240 or sc-44241. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

NOTE: For Western blot analysis prepare cell lysate as follows: Wash cells once with PBS. Lyse cells in 300 µl 1x Electrophoresis Sample Buffer (sc-24945) by gently rocking the 6 well plate or by pipetting up and down. Sonicate the lysate on ice if necessary.

NOTE: For RT-PCR analysis isolate RNA using the method described by Chomczynski and Sacchi (1987. Anal. Biochem. 162:156-159. Single-step method of RNA isolation by acid guanidinium thiocyanate-phenol-chloroform extraction.) or a commercially available RNA isolation kit.

SELECT PRODUCT CITATIONS

1. Liu, J., et al. 2004. Double transfection improves small interfering RNA-induced thrombin receptor (PAR-1) gene silencing in DU 145 prostate cancer cells. *FEBS Lett.* 577: 175-180.
2. Belkhir, A., et al. 2005. Darpp-32: a novel antiapoptotic gene in upper gastrointestinal carcinomas. *Cancer Res.* 65: 6583-6592.
3. Slominski, A., et al. 2006. An alternative pathway of vitamin D metabolism. Cytochrome P450_{scc} (CYP11A1)-mediated conversion to 20-hydroxyvitamin D₂ and 17,20-dihydroxyvitamin D₂. *FEBS J.* 273: 2891-2901.
4. Venugopal, S.K., et al. 2007. Role of MAPK phosphatase-1 in sustained activation of JNK during ethanol-induced apoptosis in hepatocyte-like VL-17A cells. *J. Biol. Chem.* 282: 31900-31908.
5. Métié, R., et al. 2008. Cyclical DNA methylation of a transcriptionally active promoter. *Nature* 452: 45-50.



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 30-Mar-2017

Version 1.3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name

siRNA Transfection Reagent

Product Code

SC-29528

Recommended use of the chemical and restrictions on use

For research use only. Not intended for diagnostic or therapeutic use.

Details of the supplier of the safety data sheet

Santa Cruz Biotechnology, Inc.

10410 Fennell Street

Dallas, TX 75220

831.457.3800

800.457.3801

scbt@scbt.com

Emergency telephone number

Chemtrec

1.800.424.9300 (Within USA)

+1.703.527.3887 (Outside USA)

2. HAZARDS IDENTIFICATION

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122).

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Signal word

Not classified

Hazard statements

Not classified

Symbols/Pictograms

Not classified

Precautionary Statements - Prevention

Wash hands thoroughly after handling

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

NFPA

Health hazards

0

Flammability

0

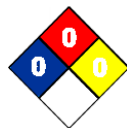
Stability

0

Physical and chemical

-

properties



HMIS

Health hazards

-

Flammability

-

Physical hazards

-

Personal protection

-

3. COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight

No information available

Formula

No information available

Chemical Name	CAS No	Weight %	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	>98	> 90 mL/kg (Rat)	-	-
Polycationic lipids	-	<1	-	-	-

4. FIRST AID MEASURES

First Aid Measures

General advice	Consult a physician if necessary. Remove to fresh air.
Eye contact	Wash with plenty of water.
Skin Contact	Wash skin with soap and water.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Ingestion	Never give anything by mouth to an unconscious person. Clean mouth with water.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	None.

Specific hazards arising from the chemical

Specific hazards arising from the chemical	No information available.
Hazardous combustion products	No information available.

Explosion data

Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.

Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation, especially in confined areas.
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Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store at 4 °C.
 Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters**

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Showers
 Eyewash stations
 Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).
 Skin and Body Protection Wear protective gloves and protective clothing.
 Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
 General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State liquid
 Appearance No information available
 Odor No information available

Property**Values**

pH	No information available
Melting point/freezing point	No information available
Boiling point	No information available
Flash point	No information available
Density	No information available
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

Information on toxicological effects

Symptoms	No information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity	No information available.
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Numerical measures of toxicity - Product Information

Unknown acute toxicity	No information available
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12. ECOLOGICAL INFORMATION

Ecotoxicity	May cause long lasting harmful effects to aquatic life
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0.1% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

14. TRANSPORT INFORMATION

DOT	Not regulated
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IMDG	Not regulated
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IATA Not regulated

15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists

No information available

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Water	X	X	-	X	-	-	X	X	X	X

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

16. OTHER INFORMATION

Revision note No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet