

# SAFETY DATA SHEET

**Product Identifier: Cell-ID™ IdU**  
**Catalog ID number: Cat# 201127 (stand-alone and Panel Kit catalog ID 201313)**

## SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Contact information

<b>General</b>	Fluidigm Corporation 7000 Shoreline Court Suite 100, South San Francisco, CA 94080 Main (U.S.): +1 (650) 266-6000 E-mail: techsupport@fluidigm.com
<b>Emergency telephone number</b>	+ (650) 266-6100 (outside US) + (866) 358-4354 (toll free)


<b>Product identifier</b>	Cell-ID™ IdU
<b>Synonyms</b>	None identified
<b>Trade names</b>	None identified
<b>Chemical family</b>	Mixture - contains 5-Iodo-2'-deoxyuridine, and Dimethyl Sulfoxide
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	For research use only. Not for use in diagnostic procedures.
<b>Note</b>	This SDS is written to address potential health and safety issues associated with the handling of the formulated product.
<b>Issue Date</b>	25 June 2015

## SECTION 2 - HAZARDS IDENTIFICATION

### Classification of the substance or mixture

<b>Globally Harmonized System [GHS]</b>	Flammable Liquid (Category 4), H227. Skin irritation (Category 2). Eye irritation (Category 2A). Germ cell mutagenicity (Category 2). Reproductive toxicity (Category 2). Specific target organ toxicity - single exposure (Category 3)
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### Label elements

<b>CLP/GHS hazard pictogram</b>	
<b>CLP/GHS signal word</b>	Warning
<b>CLP/GHS hazard statements</b>	H227 - Combustible. H315 - Causes skin irritation. H319 - Cause serious eye irritation. H335 - May cause respiratory irritation. H341 - Suspected of causing genetic defects. H361 - Suspected of damaging fertility or the unborn child.
<b>CLP/GHS precautionary statements</b>	P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking. P261 - Avoid breathing dust/fume/gas/mist/vapors/spray. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. P403 + P235 - Store in a well-ventilated place. Keep cool. P501 - Dispose of contents/ container to an approved waste disposal plant. P305; P351; P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

# SAFETY DATA SHEET

**Product Identifier: Cell-ID™ IdU**

**Catalog ID number: Cat# 201127 (stand-alone and Panel Kit catalog ID 201313)**

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## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

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<u>Ingredient</u>	<u>CAS #</u>	<u>EINECS/ ELINCS#</u>	<u>Amount</u>	<u>GHS Classification</u>
5-Iodo-2'-deoxyuridine	54-42-2	200-207-8	1.77%	Skin Irrit. 2; Eye Irrit. 2A; Muta. 2; Repr. 2; H315, H319, H335, H341, H361
Dimethyl Sulfoxide	67-68-5	200-664-3	100%	Flam. Liq. 4; H227

**Note** The ingredient(s) listed above are considered hazardous. The remaining components are non-hazardous and/or present at amounts below reportable limits. See Section 16 for full text of GHS classifications.

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## SECTION 4 - FIRST AID MEASURES

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### Description of first aid measures

<b>Immediate Medical Attention Needed</b>	Yes
<b>Eye Contact</b>	If easy to do, remove contact lenses, if worn. Immediately flush eyes with copious quantities of water for at least 15 minutes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Skin Contact</b>	Wash exposed area with soap and water and remove contaminated clothing/shoes. If irritation occurs or persists, notify medical personnel and supervisor.
<b>Inhalation</b>	Immediately move exposed subject to fresh air. If not breathing, give artificial respiration. If breathing is labored, administer oxygen. Immediately notify medical personnel and supervisor.
<b>Ingestion</b>	Do not induce vomiting unless directed by medical personnel. Do not give anything to drink unless directed by medical personnel. Never give anything by mouth to an unconscious person. Notify medical personnel and supervisor.
<b>Protection of first aid responders</b>	See Section 8 for Exposure Controls/Personal Protection recommendations.
<b>Most important symptoms and effects, both acute and delayed</b>	See Sections 2 and 11.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	No data available.

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## SECTION 5 - FIREFIGHTING MEASURES

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<b>Extinguishing media</b>	Use water spray (fog), foam, dry powder, or carbon dioxide, as appropriate for surrounding fire and materials.
<b>Specific hazards arising from the substance or mixture</b>	Carbon oxides, nitrogen oxides (NO <sub>x</sub> ), Hydrogen iodide, Sulphur oxides.
<b>Flammability</b>	Combustible.
<b>Advice for firefighters</b>	Wear full protective clothing and a self-contained breathing apparatus with a full facepiece operated in the pressure demand or other positive pressure mode. Decontaminate all equipment after use.

# SAFETY DATA SHEET

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Catalog ID number: Cat# 201127 (stand-alone and Panel Kit catalog ID 201313)

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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<b>Personal precautions, protective equipment and emergency procedures</b>	If product is released or spilled, take proper precautions to minimize exposure by using appropriate personal protective equipment (see Section 8). Area should be adequately ventilated. Do not breathe mist/vapors/spray.
<b>Environmental precautions</b>	Do not empty into drains. Avoid release to the environment.
<b>Methods and material for containment and cleaning up</b>	If vials are crushed or broken, DO NOT CAUSE MATERIAL TO BECOME AIRBORNE. For small spills, soak up material with absorbent, e.g., paper towels. For large spills, cordon off spill area and minimize the spreading of spilled material. Soak up material with absorbent. Collect spilled material, absorbent, and rinse water into suitable containers for proper disposal in accordance with applicable waste disposal regulations (see Section 13). Decontaminate the area twice.
<b>Reference to other sections</b>	See Sections 8 and 13 for more information.

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## SECTION 7 - HANDLING AND STORAGE

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<b>Precautions for safe handling</b>	Avoid breathing vapor or mist. Do not permit eating/drinking/smoking near this material. All materials used for transferring or preparing this product must be considered contaminated and disposed of properly.
<b>Conditions for safe storage including any incompatibilities</b>	Store at -20°C, keep container tightly closed in a dry and well-ventilated place. Light sensitive. Keep away from sources of ignition.
<b>Specific end use(s)</b>	No information identified.

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## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

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<b>Exposure/Engineering controls</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
<b>Respiratory protection</b>	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
<b>Hand protection</b>	Wear nitrile or other impervious gloves if skin contact is possible. When the material is diluted in an organic solvent, wear gloves that provide protection against the solvent.
<b>Skin protection</b>	Wear appropriate gloves, lab coat, or other protective overgarment if skin contact is likely. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use.
<b>Eye/face protection</b>	Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.
<b>Environmental Exposure Controls</b>	Avoid release to the environment and operate within closed systems wherever practicable. Air and liquid emissions should be directed to appropriate pollution control devices. In case of spill, do not release to drains. Implement appropriate and effective emergency response procedures to prevent release or spread of contamination and to prevent inadvertent contact by personnel.
<b>Other protective measures</b>	Wash hands in the event of contact with this product/mixture, especially before eating, drinking or smoking. Protective equipment is not to be worn outside the work area (e.g., in common areas or out-of-doors).

# SAFETY DATA SHEET

Product Identifier: Cell-ID™ IdU  
Catalog ID number: Cat# 201127 (stand-alone and Panel Kit catalog ID 201313)

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### Information on basic physical and chemical properties

<b>Appearance</b>	Clear liquid
<b>Color</b>	Colorless
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	No information identified.
<b>pH</b>	No information identified.
<b>Melting point/freezing point</b>	16 – 19 °C (61 – 66 °F).
<b>Initial boiling point and boiling range</b>	189 °C (372 °F)
<b>Flash point</b>	87 °C (189 °F) – closed cup.
<b>Evaporation rate</b>	No information identified.
<b>Flammability (solid, gas)</b>	No information identified.
<b>Upper/lower flammability or explosive limits</b>	42%(V); Lower explosion limit: 3.5%(V).
<b>Vapor pressure</b>	0.55 hPa (0.41 mmHg) at 20 °C (68 °F).
<b>Vapor density</b>	2.70 – (Air = 1.0).
<b>Relative density</b>	1.1 g/ml.
<b>Water solubility</b>	Completely miscible.
<b>Solvent solubility</b>	No information identified.
<b>Partition coefficient (<i>n</i>-octanol/water)</b>	noctanol/water log Pow: -2.03.
<b>Auto-ignition temperature</b>	No information identified.
<b>Decomposition temperature</b>	No information identified.
<b>Viscosity</b>	No information identified.
<b>Explosive properties</b>	No information identified.
<b>Oxidizing properties</b>	No information identified.

### Other information

<b>Molecular weight</b>	Not applicable (Mixture)
<b>Molecular formula</b>	Not applicable (Mixture)

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## SECTION 10 - STABILITY AND REACTIVITY

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<b>Reactivity</b>	No data available
<b>Chemical stability</b>	Stable under normal temperatures and pressures.
<b>Possibility of hazardous reactions</b>	No information identified.

# SAFETY DATA SHEET

**Product Identifier: Cell-ID™ IdU**  
**Catalog ID number: Cat# 201127 (stand-alone and Panel Kit catalog ID 201313)**

**Conditions to avoid** Heat, flames and sparks.

**Incompatible materials** Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents.

**Hazardous decomposition products** Other decomposition products – No data available.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Information on toxicological effects

**Route of entry** May be absorbed by inhalation, skin contact and ingestion.

#### Acute toxicity

<u>Compound</u>	<u>Type</u>	<u>Route</u>	<u>Species</u>	<u>Dose</u>
5-Iodo-2'-deoxyuridine	LD50	Oral	Mouse	10,000 mg/kg
	LD50	Intraperitoneal	Mouse	1,000 mg/kg
Dimethyl Sulfoxide	LD50	Oral	Rat	14,500 mg/kg
	LD50	Dermal	Rabbit	>5,000 mg/kg
	LC50/4h	Inhalation	Rat	40250 ppm

**Irritation/Corrosion** No studies identified.

**Sensitization** No studies identified.

**STOT-single exposure** Inhalation – May cause respiratory irritation

**STOT-repeated exposure/Repeat-dose toxicity** No studies identified.

**Reproductive toxicity** Suspected human reproductive toxicant. Damage to fetus cannot be excluded.

**Developmental toxicity** No studies identified.

**Genotoxicity** No studies identified.

**Carcinogenicity** Rat – oral. Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.

**Aspiration hazard** No data available.

## SECTION 12 - ECOLOGICAL INFORMATION

### Toxicity

<u>Compound</u>	<u>Type</u>	<u>Species</u>	<u>Concentration</u>
Dimethyl Sulfoxide	LC50/96h	Oncorhynchus mykiss	35,000 mg/L
	LC50/96h	Pimephales promelas	34,000 mg/L
	EC50/48h	Daphnia magna	24,600 mg/L
	EC50/72h	Pseudokirchneriella subcapitata	17,000 mg/L

**Persistence and Degradability** No data identified.

**Bioaccumulative potential** No data identified.

**Mobility in soil** No data identified.

**Results of PBT and vPvB assessment** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## SAFETY DATA SHEET

Product Identifier: Cell-ID™ IdU

Catalog ID number: Cat# 201127 (stand-alone and Panel Kit catalog ID 201313)

**Other adverse effects** No data identified.

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### SECTION 13 - DISPOSAL CONSIDERATIONS

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**Waste treatment methods** Dispose of wastes in accordance to prescribed federal, state, and local guidelines, e.g., appropriately permitted chemical waste incinerator. Do not send down the drain or flush down the toilet. All wastes containing the material should be properly labeled. Rinse waters resulting from spill cleanups should be discharged in an environmentally safe manner, e.g., appropriately permitted municipal or on-site wastewater treatment facility.

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### SECTION 14 - TRANSPORT INFORMATION

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**Transport** De minimis exemption. Hazardous ingredients are in excepted quantities. The concentration of hazardous material in this product's composition is below that which is regulated for transport.

D.O.T.: This solution is considered non-hazardous for transport.

IMDG: This solution is considered non-hazardous for transport.

IATA: This solution is considered non-hazardous for air transport.

**UN number** None assigned.

**UN proper shipping name** None assigned.

**Transport hazard classes and packing group** None assigned

**Special precautions for users** No special precautions needed. Avoid release to the environment.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**Hazardchem Code/HIN** None assigned.

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### SECTION 15 - REGULATORY INFORMATION

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**Safety, health and environmental regulations/legislation specific for the substance or mixture** This SDS complies with the requirements under US, EU and GHS (EU CLP - Regulation EC No 1272/2008) guidelines. Consult your local/regional authorities for more information.

**Chemical safety assessment** Not conducted.

**WHMIS classification(Canada)** B/3 - Combustible liquid.

**SARA section 313** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California proposition 65** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Federal and State Regulations:** TSCA 8(b) inventory: Dimethyl sulfoxide

# SAFETY DATA SHEET

**Product Identifier: Cell-ID™ IdU**

**Catalog ID number: Cat# 201127 (stand-alone and Panel Kit catalog ID 201313)**

**Component Analysis – Chemical Inventory** Dimethyl sulfoxide is listed in the chemical inventory of the following countries: USA, Australia, Canada, China, EU, Japan, Korea, New Zealand, and the Philippines.

**Additional information** No other information identified.

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## SECTION 16 - OTHER INFORMATION

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<b>NFPA Ratings</b>	<b>IdU DMSO</b>	<b>Health: 1 Health: 0</b>	<b>Fire: 0 Fire: 2</b>	<b>Reactivity: 0 Reactivity: 0</b>
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**Full text of H phrases and GHS classifications** Skin Irrit. Skin irritation. Eye Irrit. Eye irritation. Muta. Germ cell mutagenicity. Repr. Reproductive toxicity. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H361 Suspected of damaging fertility or the unborn child. Flam. Liz. Flammable liquids. H227 Combustible liquid.

**Sources of data** Information from published literature and internal company data.

**Abbreviations** ACGIH - American Conference of Governmental Industrial Hygienists; ADR/RID - European Agreement Concerning the International Carriage of Dangerous Goods by Road/Rail; AIHA - American Industrial Hygiene Association; CA - California; CAS# - Chemical Abstract Services Number; CLP - Classification, Labelling, and Packaging of Substances and Mixtures; DNEL - Derived No Effect Level; DOT - Department of Transportation; EINECS - European Inventory of New and Existing Chemical Substances; ELINCS - European List of Notified Chemical Substances; EU - European Union; GHS - Globally Harmonized System of Classification and Labeling of Chemicals; HI - Hawaii; IARC - International Agency for Research on Cancer; IDLH - Immediately Dangerous to Life or Health; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; LOEL - Lowest Observed Effect Level; LOAEL - Lowest Observed Adverse Effect Level; MA - Massachusetts; MN - Minnesota; NJ - New Jersey; NIOSH - The National Institute for Occupational Safety and Health; NOEL - No Observed Effect Level; NOAEL - No Observed Adverse Effect Level; NTP - National Toxicology Program; OEL - Occupational Exposure Limit; OSHA - Occupational Safety and Health Administration; PA - Pennsylvania; PNEC - Predicted No Effect Concentration; RI - Rhode Island; SARA - Superfund Amendments and Reauthorization Act; STEL - Short Term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; VT - Vermont; WA - Washington; WHMIS - Workplace Hazardous Materials Information System

**Revisions** This is the first version of this SDS.

**Disclaimer** The statements contained herein are offered for informational purposes only and are based upon technical data. Fluidigm Corporation believes them to be accurate at the date of publication, but does not purport to be all-inclusive. The above-stated product is intended for use only by persons having the necessary technical skills and facilities for handling the product at their discretion and risk. Since conditions and manner of use are outside our control, we (Fluidigm Corporation) make no warranty of merchantability or any such warranty, express or implied with respect to information and we assume no liability resulting from the above product or its use. Users should perform their own investigations to determine suitability of information and product for their particular purposes.