Safety Data Sheet

oncoReveal® Solid Tumor 22 Gene Panel

Identification

Product name

oncoReveal Solid Tumor 22 Gene Panel Kit,
24 reactions per kit, PN# HDA-LC-1001-24

Kit Components:

LC Oligo Pool, PN# LC-103A-24
Gene Specific PCR Master Mix, PN# MM-9001-24
Indexing PCR Master Mix, PN# MM-9004-24

Company details

Name: Pillar Biosciences, Inc.

Address: 9 Strathmore Road
Natick, MA 01760 USA

Telephone: 1-508-655-3027

Emergency response

In case of emergencies: CHEMTREC
1-800-424-9300 (U.S. or Canada)
1-703-527-3887 (International)

Recommended use of product

For research use only
For use by trained professionals only

Hazard(s) Identification

GHS classification

The product is a kit consisting of individual ingredients. The classification of individual components can be found in section 3

Composition / Information on Ingredients

LC Oligo Pool, PN# LC-103A-24

GHS classification	Contains compounds considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).
Hazardous components	Dimethyl sulfoxide, DMSO

Gene Specific PCR Master Mix, PN# MM-9001-48

GHS classification	Not a hazardous substance or mixture.
Hazardous components	None

Indexing PCR Master Mix, PN# MM-9004-24

GHS classification	Not a hazardous substance or mixture.
Hazardous components	None

Dimethyl sulfoxide, DMSO

CAS	67-68-5
Concentration	≤ 20%

NFPA

Health	1
Fire	1
Reactivity	0

First-Aid Measures

Route of Exposure

Inhalation	Move to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a physician.
Skin contact	Remove contaminated clothing. Wash affected area with soap and water.
Eye contact	Remove contact lenses. Immediately flush opened eye with water. Wash eyes with plenty of water for at least 15 minutes. Consult a physician.
Swallowed	Keep respiratory tract clear. Rinse mouth with water. Do not induce vomiting. Consult a physician.
General	Consult a physician after significant exposure and/or persistent symptoms.
Note to physician	Treat symptomatically

Fire-Fighting Measures

Suitable extinguishing agents	For small fires use carbon dioxide, dry chemical, water spray, or foam extinguishers. Cool closed containers exposed to fire with water spray. For large fires use extinguishing media suitable for the surrounding environment.
Hazardous Combustion products	Carbon oxides, Sulphur oxides, nitrogen oxides.
Special protective equipment and precautions for fire-fighters	Wear self-contained breathing apparatus if necessary.

Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures	Use personal protective equipment (PPE). Avoid breathing vapors, mist, or gas. Use in well-ventilated area.
Environmental precautions	Do not allow product to enter drains, sewage, surface, or ground water.
Methods and materials for containment and clean up	Remove spilled liquids mechanically with inert absorbent material and dispose according to local regulations. Keep in appropriate, closed containers for disposal. Report spills to the environment of any spill materials that reach the RQ.

Handling and Storage

Precautions for safe handling	• Use good laboratory practices. Do not eat, drink, or smoke in operation area. • Avoid formation of aerosol. • Immediately remove soiled or contaminated clothing. • Wash hands before and after use. • Avoid contact with eyes or skin. • Use in a well-ventilated area and keep containers tightly sealed.
Conditions for safe storage	Store according to individual container labelling and keep container tightly sealed.

Exposure Controls / Personal Protection

LC Oligo Pool, PN# LC-103A-24

Hazardous components	Dimethyl sulfoxide, DMSO
Control parameters:	
Components	Dimethyl sulfoxide, DMSO
CAS	67-68-5
Value type	TWA
Permissible concentration	250ppm
Basis	US WEEL
Appropriate engineering controls	Ensure adequate ventilation, especially in confined areas
Personal protective equipment	• **Eye protection:** wear safety glasses with side shields • **Hand protection:** wear impervious gloves • **Skin and body protection:** wear lightweight protective clothing • **Hygiene measures:** handle using good industrial hygiene and safety practices

Physical and Chemical Properties

LC Oligo Pool, PN# LC-103A-24

Hazardous components	Dimethyl sulfoxide, DMSO
Appearance	Clear, colorless liquid
Odor	Faint garlic odor
pH	Not available
Melting point	18.5 °C (65.3 °F)
Freezing point	18.5 °C (65.3 °F)
Initial boiling point	189 °C (372.2 °F)
Flash point	87 °C (188.6 °F) (Closed Cup)
Evaporate rate	Not available

Flammability	Combustible liquid. Will be ignited by heat, sparks or flames. Vapors will spread along ground and collect in low or confined areas (sewers, basements, tanks). Containers may explode when heated.
Explosive limits	Vapors may form explosive mixtures with air
Vapor pressure	59.4 Pa at 20 °C (68 °F)
Vapor density	2.7 (Air = 1)
Relative density	1.1 (Water = 1)
Solubility in water	Completely miscible
Auto-ignition temperature	Does not self-ignite
Decomposition temperature	Not available
Viscosity	Not available

Stability and Reactivity

LC Oligo Pool, PN# LC-103A-24

Hazardous components	Dimethyl sulfoxide, DMSO
Reactivity	Contact with incompatible materials. Sources of ignition. Exposure to heat
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	None known
Conditions to avoid	Stable under normal conditions
Incompatible materials	Strong oxidizers, perchlorates
Hazardous decomposition products	Methane, ethylene, and sulfur dioxide

Toxicological Information

LC Oligo Pool, PN# LC-103A-24

Hazardous components	Dimethyl sulfoxide, DMSO

Acute oral toxicity	May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea
Acute inhalation toxicity	May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Exposure to high concentrations of Dimethyl sulfoxide could cause lowering of consciousness.
Acute dermal toxicity	Unknown
Aspiration toxicity	Not classified
Skin corrosion/irritation assessment	Dimethyl sulfoxide may irritate the skin and mucous membranes
Serious eye damage/eye irritation assessment	May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Dimethyl sulfoxide may accelerate skin absorption of other materials. A skin irritation assay performed in rabbit (OECD 404) revealed no more than a very slight or well-defined erythema, which disappeared in 3 days
Respiratory or skin sensitization-Assessment	Sensitization tests using DMSO performed in guinea pigs and mice were uniformly negative. A skin sensitization assay performed in humans was also negative.
Genotoxicity – Assessment:	
IARC	DMSO was negative for genotoxicity when tested in the Salmonella typhimurium pre-incubation protocol at concentrations of DMSO (100, 333, 1000, 3333, 10000 ug) /with strains TA97, TA98, TA100, TA102, TA104, TA1537, and TA1538 DMSO was tested in Chinese hamster ovary cells to a maximum concentration of 5000 ug/mL with and without metabolic activation. DMSO did not induce cell toxicity or cell cycle delay, and did not induce an increase in the incidence of SCEs.

OSHA	There are no standard carcinogenicity studies conducted with DMSO, but considering the lack of genotoxic potential, the absence of target organs in many repeated dose toxicity studies performed with diverse animal species, routes of administration and exposure durations up to 2 years and the results of some initiation/promotion studies, it is not scientifically justified to perform a carcinogenicity study.
NTP	This product does not contain any carcinogens or potential carcinogens as listed by ACGIH, IARC, OSHA, or NTP.
Reproductive toxicity	In a Reproduction/Developmental Toxicity Screening Test performed following OECD 421, the NOAEL for parental toxicity, reproductive performance (mating and fertility) and toxic effects on the progeny was cons idered to be 1000 mg/kg/day
STOT – single exposure	No data available
STOT – repeated exposure	No data available

Ecological Information

LC Oligo Pool, PN# LC-103A-24

Hazardous components	Dimethyl sulfoxide, DMSO
Ecotoxicity:	
Toxicity to fish	Danio rerio: LC50 > 25 g/L, 96-hr, freshwater, static;
Toxicity to algae	Green algae: EC50 = 27448.3 mg/, 96-hr Green algae: ChV = 426.9 mg/L, 96-hr
Toxicity to fish (chronic)	No data available
Toxicity to bacteria	No data available

Persistence and degradability	• DMSO is not considered as persistent in environment • No biodegradation data available • Low bioconcentration expected in aquatic organisms • May adsorb to soil particles
Bioaccumulative potential:	
Octanol/water partition coefficient	Based on its log Kow value (-1.35) DMSO has a low potential for bioaccumulation
Mobility in soil	DMSO Log Koc is estimated as 0.64, using a log Kow of -1.35 and a regression-derived equation. This estimated Koc value suggests that DMSO is expected to have very high mobility in soil

Disposal Considerations

LC Oligo Pool, PN# LC-103A-24

Hazardous components	Dimethyl sulfoxide, DMSO
Disposal methods	• Disposal should be in accordance with applicable regional, national and local laws and regulations. • Local regulations may be more stringent than regional or national requirements • Wear chemically compatible gloves and protective clothing. Avoid breathing vapor. Place product in appropriately labeled container for disposal • Do not allow product to contaminate waterways
Contaminated packaging	• Empty remaining contents and dispose as if unused product • Empty containers should be taken to an approved waste handling site for recycling or disposal • Do not reuse containers

Transport Information

International Regulation

IATA-DGR:	Not regulated as a dangerous good

IMDG-Code:	Not regulated as a dangerous good
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable, packaged goods

National Regulations

49 CFR:	Not regulated as a dangerous good

Regulatory Information

Use general safety regulations when handling chemicals

Inventories	The hazardous components are listed on the following inventories
AICS:	DMSO
DSL:	DMSO
ENCS:	DMSO
IECSC:	DMSO
KECL:	DMSO
NZIoC:	DMSO
PICCS:	DMSO
REACH:	DMSO
TSCA:	DMSO
CERCLA Reportable Quantity:	No ingredients listed

SARA:

302:	No ingredients listed
304 Extremely hazardous	No ingredients listed

Substances reportable quantity:

311/312:	No ingredients listed
313:	No ingredients listed
Clean Air Act	This material does not contain any hazardous air pollutants. This material does not contain any Class 1 or Class 2 ozone depletors

Clean Water Act	None of the chemicals in this product are listed as Hazardous Substances, Priority Pollutants, or Toxic Pollutants under the CWA
Carcinogenetic categories:	
Environmental Protection Agency (EPA):	No ingredients listed
International Agency for Research on Cancer (IARC):	No ingredients listed
National Toxicology Program (NTP):	No ingredients listed
Threshold Limit Value established by ACGIH:	Not established
German Maximum Workplace Concentration (MAK):	50 ml/m^3
National Institute for Occupational Safety and Health (NIOSH):	No PEL established
Occupational Safety and Health Administration (OSHA):	No PEL established
California Proposition 65:	
Chemicals known to cause cancer:	No ingredients listed
Reproductive toxicity in females:	No ingredients listed
Reproductive toxicity in males:	No ingredients listed
Developmental toxicity:	No ingredients listed
U.S. State Regulations	
Massachusetts Right to Know:	No ingredients listed
New Jersey Right to Know:	Dimethyl sulfoxide, DMSO
Pennsylvania Right to Know:	No ingredients listed
Water Hazard class:	Slightly harardous for water

Other Information

The information provided is correct to the best of our knowledge, information and belief at the date of publication. The information given is designed merely as guidance for the safe handling, use, processing, storage, transportation, disposal and release of the specific contents. The information relates only to the

specific material designated and may not be valid for material used in combination with any other materials or in any process not explained within the text.

Date of Preparation of SDS: 30 July 2025