SAFETY DATA SHEET

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

PRODUCT IDENTIFIER

Product Name	HerediSeq™ for Cancer crRNA Pool 2
Product Number	311489

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE

Recommended Use	Reagent

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier	Blackhawk Genomics 2872 Ygnacio Valley Road Suite 226 Walnut Creek, CA 94598
Manufacturer	Blackhawk Genomics 2872 Ygnacio Valley Road Suite 226 Walnut Creek, CA 94598

EMERGENCY TELEPHONE NUMBER

Emergency telephone	ChemTrec 800-424-9300

2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

OSHA Regulatory Status	This product is not hazardous under the OSHA Hazard Communication Standard.
Indeling (classification)	THIS PRODUCT IS CONSIDERED NON-HAZARDOUS. Per OSHA 29CFR1910.1200, Commonwealth of Australia [NOHSC: 1005, 1008(1999)], and the latest amendments to the European Union Directives (EC) No 1907/2006 and (EC) No 2015/830, this product does not require a Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS). This product does not contain more than 1% of a component classified as hazardous and does not contain more than 0.1% of a component classified as carcinogenic. This product is non-hazardous according to Regulation (EC) No 1272/2008. Despite the classification of certain products/components as non-hazardous, we strongly recommend using

prudent laboratory practices: avoiding unnecessary contact and use of personal protective equipment, which may include gloves, eye protection, and lab coats, during the use of a ny laboratory reagent. Blackhawk Genomics shall not be held liable for any damages resulting from handling or from contact with the above product.

OTHER HAZARDS

This substance is not classified as PBT or vPvB according to current EU criteria.

3. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCES

Product Name	crRNA – N

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST-AID MEASURES

General Information	If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie, or belt. Get medical attention if symptoms are severe or persist.
Ingestion	Rinse mouth thoroughly with water. Get medical advice/attention if you feel unwell. Do not induce vomiting unless under the direction of medical personnel.
Skin Contact	Rinse with water.
Eye Contact	Remove any contact lenses and open eyelids wide apart. Rinse with water. Get medical attention if any discomfort continues.
Protection of first-aiders	First-aid personnel should wear appropriate protective equipment during any rescue.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

General Information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms are known.
Ingestion	No specific symptoms are known.
Skin Contact	No specific symptoms are known.
Eye Contact	No specific symptoms are known.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Notes for the Doctor	Treat symptomatically.
Specific Treatments	No special treatment required.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable Extinguishing Media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder, or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable Extinguishing Media	Do not use water jet as an extinguisher as this will spread the fire.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Specific hazards	None known.
Hazardous Combustion Products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

ADVICE FOR FIREFIGHTERS

Protections Actions During Firefighting	Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire are if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak.
Special Protective Equipment For Firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Personal Precautions	Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material.

ENVIRONMENTAL PRECAUTIONS

Environmental Precautions	Avoid discharge into drains or watercourses or onto the ground.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Methods for Cleaning Up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Flush contaminated

area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

Reference to Other Sections: For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Usage Precautions: Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink, and animal feeding stuffs.

Advice on General Occupational Hygiene: Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage Precautions: Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well-ventilated place. Keep containers upright. Protect containers from damage.

Storage Class: Unspecified storage.

SPECIFIC END USE(S)

Specific End Use(s): The identified uses for this product are detailed in Section 1.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS

Appropriate Engineering Controls: Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/Face Protection: Wear eye protection.

Hand Protection: Wear protective gloves.

Other Skin and Body Protection: Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene Measures: Wash after use and before eating, smoking, and using the toilet. Do not eat, drink, or smoke when using this product.

Respiratory Protection: Respiratory protection is not required. When protection from nuisance levels is required, ensure all respiratory protective equipment is suitable for its intended use and is NIOSH-approved. Check that the respirator fits tightly, and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask

	respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental Exposure Controls	Keep container tightly sealed when not in use.

9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid.
Appearance	Colorless liquid.
Odor	Odorless.
Odor Threshold	Not available.
pH	Not available.
Melting Point	Not available.
Initial Boiling Point and Range	Not available.
Flash Point	Not available.
Evaporation Rate	Not available.
Evaporation Factor	Not available.
Flammability (Solid, Gas)	Not available.
Upper/Lower Flammability or Explosive Limits	Not available.
Other Flammability	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Relative Density	Not available.
Bulk Density	Not available.
Solubility(ies)	Not available.
Partition Coefficient	Not available.
Auto-Ignition Temperature	Not available.
Decomposition Temperature	Not available.

Viscosity	Not available.
Explosive Properties	Not available.
Explosive Under the Influence of a Flame	Not considered to be explosive.
Oxidizing Properties	Not available.

10. STABILITY AND REACTIVITY

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of Hazardous Reactions	No potentially hazardous reactions known.
Conditions to Avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to Avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous Decomposition Products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Toxicological Effects	Not regarded as a health hazard under current legislation.
Acute Toxicity – Oral Notes (Oral LD_{50})	Based on available data, the classification criteria are not met.
Acute Toxicity – Dermal Notes (Dermal LD_{50})	Based on available data, the classification criteria are not met.
Acute Toxicity – Inhalation Notes (Inhalation LC_{50})	Based on available data, the classification criteria are not met.
Skin Corrosion/Irritation Animal Data	Based on available data, the classification criteria are not met.
Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
Respiratory Sensitization	Based on available data, the classification criteria are not met.
Skin Sensitization	Based on available data, the classification criteria are not met.
Genotoxicity – in vitro	Based on available data, the classification criteria are not met.

Carcinogenicity	Based on available data, the classification criteria are not met.
IARC Carcinogenicity	None of the ingredients are listed or exempt.
Reproductive Toxicity – Fertility	Based on available data, the classification criteria are not met.
Reproductive Toxicity – Development	Based on available data, the classification criteria are not met.
Specific Target Organ Toxicity – Single Exposure	Not classified as a specific organ toxicant after a single exposure.
Specific Target Organ Toxicity – Repeated Exposure	Not classified as a specific organ toxicant after repeated exposure.
Aspiration Hazard	Based on available data, the classification criteria are not met.
General Information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin Contact	No specific symptoms known.
Eye Contact	No specific symptoms known.
Route of Exposure	Ingestion, Inhalation, Skin and/or Eye Contact
Target Organs	No specific target organs known.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.
Toxicity	Based on available data, the classification criteria are not met.
Persistence and Degradability	The degradability of the product is not known.
Bio-Accumulative Potential	No data available on bio-accumulation.
Partition Coefficient	Not available.
Mobility in Soil	No data available.
Other Adverse Effects	None known.

13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

General Information	The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
Disposal Methods	Do not empty into drains.

14. TRANSPORT INFORMATION

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN NUMBER

UN No. (International)	Not applicable.
UN No. (DOT)	Not applicable.
UN No. (IATA)	Not applicable.

UN PROPER SHIPPING NAME

Proper Shipping Name (International)	Not applicable.
Proper Shipping Name (DOT)	Not applicable.
Proper Shipping Name (IATA)	Not applicable.

TRANSPORT HAZARD CLASS(ES)

Transport Labels (International)	No transport warning sign required.
IATA Hazard Class	Not applicable.
DOT Transport Labels	No transport warning sign required.

PACKING GROUP

Packing Group (International)	Not applicable.
DOT Packing Group	Not applicable.

IATA Packing Group	Not applicable.
ENVIRONMENTAL HAZARDS	
Environmentally Hazardous Substance	No.
Special Precautions for User	Not applicable.
DOT Reportable Quantity	Not applicable.
DOT TIH Zone	Not applicable.
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
None of the ingredients are listed or exempt.

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA – Essential Chemical
None of the ingredients are listed or exempt.

FDA – Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US STATE REGULATIONS

California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)
None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
None of the ingredients are listed or exempt.

Massachusetts "Right to Know" List
None of the ingredients are listed or exempt.

Rhode Island "Right to Know" List
None of the ingredients are listed or exempt.

Minnesota "Right to Know" List
None of the ingredients are listed or exempt.

New Jersey "Right to Know" List
None of the ingredients are listed or exempt.

Pennsylvania "Right to Know" List
None of the ingredients are listed or exempt.

INVENTORIES

US – TSCA
None of the ingredients are listed or exempt.

US – TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. OTHER INFORMATION

Abbreviations and Acronyms Used in the Safety Data Sheet	TDG: The transport of dangerous goods act IATA: International air transport association ICAO: Technical instructions for the safe transport of dangerous goods by air IMDG: International maritime dangerous goods CAS: Chemical abstracts service ATE: Acute toxicity estimate LC_{50}: Lethal concentration to 50% of a test population LD_{50}: Lethal dose to 50% of a test population (medial lethal dose) EC_{50}: 50% of maximal effective concentration PBT: Persistent, bio-accumulative and toxic substance vPvB: Very persistent and very bio-accumulative
Training Advice	Only trained personnel should use this material.
Version Date	July 1, 2021

Version 1.0

Disclaimer

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END SAFETY DATA SHEET