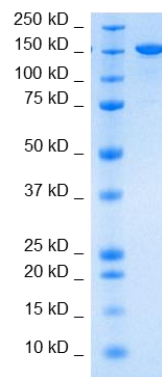


## Product description

Nivolumab is a fully human IgG4 monoclonal antibody that acts as an immunomodulator by blocking ligand activation of programmed cell death 1 (PD-1) receptor on T cells. The average weight of the antibody is 143,6kDa. The Nivolumab-like stable isotope labelled standard is suited for quantifying Nivolumab in human serum samples.

<b>Nivolumab sequence</b>	<p><b>Heavy chain</b>                  QVQLVESGGGVVQPGRSLRLDCKASGITFSNSGMHWVRQAPGKGLEWVAVIWYDGSKRYYADSVK                  GRFTISRDN SKNTLFLQMNSLRAEDTAVYYCATNDYWGQGLTVTVSSASTKGPSVFPLAPCSRSTS                  ESTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVTPSSSLGKTKYTCNVD                  HKPSNTKVDKRVESKYGPPCPPCPAPEFLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSDQEDPEV                  QFNWYVDGVEVHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTIKAK                  GQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGGSFFL                  YSRLTVDKSRWQEGNVFSCSV MHEALHNHYTQKLSLSLGLK</p> <p><b>Light chain</b>                  EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGS                  GTDFTLTISSLEPEDFAVYYCQQSSNWPRTFGQGKVEIKRTVAAPSVFIFPPSDEQLKSGTASVCL                  LNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDYSLSTLTLKADYEEKHKVYACEVTHQGL                  SSPVTKSFRGEC</p>	
<b>Purity</b>	Greater than 95% as determined by SDS-PAGE analysis	
<b>Isotope incorporation</b>	Arginine: $^{13}\text{C}_6$ , $^{15}\text{N}_4$ , >99% Lysine: $^{13}\text{C}_6$ , $^{15}\text{N}_2$ , >99%	
<b>Form and reconstitution</b>	The product is supplied as a lyophilized powder. Store below $-20^\circ\text{C}$ upon receipt.  Reconstitute by adding ultrapure water and let 15-20 min at room temperature to optimize reconstitution, vortex and centrifuge. After reconstitution, protein can be kept at $4^\circ\text{C}$ for a few weeks.	



## Packaging

Protein	Description	Storage solution	Total quantity
NIVOlike-13C15N	Stable isotope labelled standard for quantification of Nivolumab in biological samples using LC-MS	5 mM Histidine pH6 60 mM trehalose 0.01% Polysorbate 20	10 µg

**This product is for research use only and is not intended for diagnostic or therapeutic use. PROMISE Advanced Proteomics shall not be held responsible for any damages resulting from the use of this product.**

# Nivolumab-like labelled standard



<b>Legal</b>	This product is licensed under U.S. Patent No. 7,396,688 and foreign counterparts from E. I. du Pont de Nemours and Company. The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product for research and development only. Information about licenses for other uses is available from: E. I. du Pont de Nemours and Company; Attn: Associate Director, Commercial Development; DuPont Experimental Station E268; 200 Powdermill Rd.; Wilmington, DE 19803; 1-877-881-9787 (voice), 1-302-695-1437 (fax), <a href="mailto:licensing@dupont.com">licensing@dupont.com</a> .
--------------	--

## **PROMISE Advanced Proteomics**

Zone Minatec Entreprises – BHT 52A  
7, parvis Louis Néel – CS20050  
38040 Grenoble Cedex 9 – France

Tel : +33 (0) 4.38.02.36.61  
Fax : +33 (0) 4.76.96.10.38  
[contact@promise-proteomics.com](mailto:contact@promise-proteomics.com)  
[www.promise-proteomics.com/](http://www.promise-proteomics.com/)

# SAFETY DATASHEET

Issuing Date : 2017/06/27

Revision Date :

Version: 1

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product identifier** : Nivolumab-Like-C13N15

### **Relevant identified uses of the substance or mixture and uses advised against**

This product is for research use only.

This product is not intended for therapeutic use. It should not be administered to humans or animals.

### **Details of the supplier of the safety data sheet**

PROMISE Advanced Proteomics

7 parvis Louis Néel, CS20050, Bat52A

38040 Grenoble

FRANCE:

Tel: +33.4.38.02.36.50

Fax: +33.4.38.02.10.38

Email: [contact@promise-proteomics.com](mailto:contact@promise-proteomics.com)

**Emergency telephone number:** +0033.4.38.02.36.50 (8.00am-17.00pm)

**Email:** [reactovigilance@promise-proteomics.com](mailto:reactovigilance@promise-proteomics.com)

## 2. HAZARDS IDENTIFICATION

Classification of the substance

Non-Toxic and Non-Infectious

### **Label elements**

### **Other information**

The preparations do not contain any animal derived additives.

The materials do not come from a facility where work with exotic viruses affecting livestock and avian species is conducted.

The materials are recombinant but contain no genes and express no products of exotic livestock or poultry disease agents.

## 3. COMPOSITION/INFORMATION OF INGREDIENTS

Stable isotopically labelled Nivolumab-like

## 4. FIRST AID MEASURES

### **Description of first aid measures**

- Eye contact: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
- Skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

- Ingestion: Clean mouth with water. Drink plenty of water.
- Inhalation: Move to fresh air.

### **Most important symptoms and effects, both acute and delayed**

No information available

### **Indication of any immediate medical attention and special treatment needed**

Treat symptomatically

## **5. FIRE-FIGHTING MEASURES**

### **Extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### **Special hazards arising from the substance or mixture**

None in particular.

### **Advice for fire-fighters**

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus and full protective gear.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so.

### **Methods and materials for containment and cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

## **7. HANDLING AND STORAGE**

### **Precautions of safe handling**

Ensure adequate ventilation.

### **Conditions of safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.

### **Specific end uses**

No information available.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters:**

Exposure limits: National occupational exposure limits

Derived No Effect Level: No information available

Predicted No Effect Concentration: No information available

### **Exposure controls:**

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye protection Tightly fitting safety goggles.

Hand protection Protective gloves.  
Skin and body protection Long sleeved clothing.  
Respiratory protection No special protective equipment required.  
Thermal hazards No information available

#### **Hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** : No information available.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Information on basic physical and chemical properties**

Physical State @20°C: No information available

Odor: No information available

Appearance: no information available

pH: No information available

Melting/freezing point: No information available

Boiling point/boiling range: No information available

Flash point: No information available

Evaporation rate: No information available

Flammability (solid,gas): No information available

Vapor pressure: No information available

Vapor density: No information available

Relative density: No information available

Water solubility: No information available

Solubility in other solvents: No information available

Partition coefficient : n-octanol/water: No information available

Autoignition temperature: No information available

Decomposition temperature: No information available

Viscosity, kinematic: No information available

Explosive properties: No information available

VOC content (%): No information available

## **10. STABILITY AND REACTIVITY**

Reactivity: No information available

Chemical stability: Stable under normal conditions

Precautional Statements: None under normal processing

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: None in particular

Hazardous decomposition products: None under normal conditions.

## **11. TOXICOLOGICAL INFORMATION**

### **Information on toxicological effects**

Product information: No data available

Inhalation: No data available

Eye contact: No data available

Skin contact: No data available

Ingestion: No data available

### **Chronic toxicity**

Corrosivity: No information available

Sensitization: No information available

Neurological effects: No information available

Reproductive toxicity: No information available

Mutagenic effects: No information available

Target Organ effects: No information available

## 12. ECOLOGICAL INFORMATION

Toxicity: As supplied, the preparation is not expected to present significant adverse environmental effects.

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility in soil: No information available

Results of PBT and vPvB assessment: No information available

Other adverse effects: No information available

## 13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products: Dispose of in accordance with local regulations.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

## 15. REGULATORY INFORMATION

## 16. OTHER INFORMATION

Issue date: 2017/06/27

Revision Note:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of 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 of 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 any in process, unless specified in the text.