

Trade name: Biotin Chromogenic Detection Kit

#K0661

#K0662

Components of the Kit:

Streptavidin-AP Conjugate
50X BCIP/NBT Solution
Blocking Reagent (powder)
10X Blocking/Washing Buffer
10X Detection Buffer

Note:

There is added Material Safety Data Sheet only for hazardous component of the Kit.

MATERIAL SAFETY DATA SHEET
Prepared in accordance with ISO 11014-1 Standard




Printed: 07/23/2013

Revised: 07/19/2013

1 Identification

- **Product identifier**
- **Trade name: 50x BCIP/NBT Solution**
· (for Biotin Chromogenic Detection Kit)
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation:** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Thermo Fisher Scientific Baltics UAB
V.Graiciuno 8
LT-02241 Vilnius
Lithuania
Tel.: +370 5 2602131
Fax.: +370 5 2602142
- **Further information obtainable from:**
Please visit our site: <http://www.thermoscientific.com/onebio>
Contact us: ts.molbio.eu@thermofisher.com
- **Emergency telephone number:**
For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident),
Call CHEMTREC Day or Night
Domestic North America: 1-800-424-9300
International: 1-703-527-3887 (collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 -  **Toxic**
May cause harm to the unborn child.
 -  **Harmful**
Harmful by inhalation and in contact with skin.
 -  **Irritant**
Irritating to eyes.
- **Information concerning particular hazards for human and environment:**
The product has to be labeled due to the calculation procedure of international guidelines.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with directives on hazardous materials.
- **Code letter and hazard designation of product:**
Toxic

(Contd. on page 2)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 07/23/2013

Revised: 07/19/2013

Trade name: 50x BCIP/NBT Solution

(Contd. of page 1)

- **Hazard-determining components of labeling:**

N,N-dimethylformamide

- **Risk phrases:**

May cause harm to the unborn child.
Also harmful by inhalation and in contact with skin.
Irritating to eyes.

- **Safety phrases:**

Avoid exposure - obtain special instructions before use.
Keep container in a well-ventilated place.
Do not breathe gas/fumes/vapour/spray.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
This material and its container must be disposed of as hazardous waste.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2
 Fire = 0
 Reactivity = 0

- **HMS-ratings (scale 0 - 4)**



HEALTH *2 Health = *2
 FIRE 0 Fire = 0
 REACTIVITY 0 Reactivity = 0

* - Chronic health hazard present. Long-term exposure to the material could cause health problems.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Solution, consisting of the following components.

- **Components:**

68-12-2	<i>N,N</i> -dimethylformamide	>50%
7732-18-5	water	10-25%
298-83-9	5,5'-diphenyl-3,3'-bis(4-nitrophenyl)-2,2'-(3,3'-dimethoxybiphenyl-4,4'-ylene) ditetrazolium dichloride	1-2.5%

- **Other components:**

Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29 CFR 1910.1200.

- **SVHC**

68-12-2	<i>N,N</i> -dimethylformamide
---------	-------------------------------

USA

(Contd. on page 3)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 07/23/2013

Revised: 07/19/2013

Trade name: 50x BCIP/NBT Solution

(Contd. of page 2)

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.

(Contd. on page 4)

USA

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 07/23/2013

Revised: 07/19/2013

Trade name: 50x BCIP/NBT Solution

(Contd. of page 3)

- **Information about protection against explosions and fires:**
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

68-12-2 N,N-dimethylformamide

PEL	30 mg/m ³ , 10 ppm Skin
REL	30 mg/m ³ , 10 ppm Skin
TLV	30 mg/m ³ , 10 ppm Skin; BEI

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 07/23/2013

Revised: 07/19/2013

Trade name: 50x BCIP/NBT Solution

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Solution
Color:	Yellow-brown
Odor:	Nearly odorless

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Density: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity

· Chemical stability

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· Possibility of hazardous reactions: No dangerous reactions known.

· Conditions to avoid: No further relevant information available.

· Incompatible materials: No further relevant information available.

· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

68-12-2 N,N-dimethylformamide

Oral	LD50	2800 mg/kg (rat)
Dermal	LD50	4720 mg/kg (rabbit)
Inhalative	LC50/4 h	9400 mg/l (mouse)

· Primary irritant effect:

· on the skin: No irritant effect.

(Contd. on page 6)

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 07/23/2013

Revised: 07/19/2013

Trade name: 50x BCIP/NBT Solution

(Contd. of page 5)

- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
May cause harm to the unborn child.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

68-12-2 | N,N-dimethylformamide

3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|-------------|
| <ul style="list-style-type: none"> · UN-Number · DOT, ADR, ADN, IMDG, IATA | <p>Void</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, ADR, ADN, IMDG, IATA | <p>Void</p> |

(Contd. on page 7)

USA

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 07/23/2013

Revised: 07/19/2013

Trade name: 50x BCIP/NBT Solution

(Contd. of page 6)

- | | |
|--|-----------------|
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

68-12-2 | N,N-dimethylformamide

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogeny categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

68-12-2 | N,N-dimethylformamide

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Product related hazard information:**

The product has been classified and marked in accordance with directives on hazardous materials.

(Contd. on page 8)

USA

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1 Standard

Printed: 07/23/2013

Revised: 07/19/2013

Trade name: 50x BCIP/NBT Solution

(Contd. of page 7)

· Hazard symbols:*Toxic***· Hazard-determining components of labeling:***N,N-dimethylformamide***· Risk phrases:***May cause harm to the unborn child.**Also harmful by inhalation and in contact with skin.**Irritating to eyes.***· Safety phrases:***Avoid exposure - obtain special instructions before use.**Keep container in a well-ventilated place.**Do not breathe gas/fumes/vapour/spray.**Wear suitable protective clothing, gloves and eye/face protection.**In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).**This material and its container must be disposed of as hazardous waste.***· Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information**

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Thermo Fisher Scientific is not held liable for any damage resulting from handling or from contact with the above mentioned products.

MSDS has been prepared in accordance with ISO 11014-1 Standard and OSHA Hazard Communication Standard 29 CFR 1910.1200.

USA