



SAFETY DATA SHEET DAB CHROMOGEN

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name DAB CHROMOGEN

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses For research use only.

1.3. Details of the supplier of the safety data sheet

Supplier Web: www.bio-rad-antibodies.com
Bio-Rad
Endeavour House
Langford Business Park
Kidlington
Oxford
OX5 1GE
Tel. +44 (0)1865 852700
antibody_safetydatasheets@bio-rad.com

Contact person Technical Services Manager

1.4. Emergency telephone number

Emergency telephone +1 7037415970 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318 Muta. 2 - H341 Carc. 1B - H350

Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Danger

Hazard statements H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H350 May cause cancer.

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Precautionary statements	<p>P260 Do not breathe vapour/ spray.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	HYDROCHLORIC ACID, BIPHENYL-3,3',4,4'-TETRAYL-TETRAAMINE
Supplementary precautionary statements	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p>

2.3. Other hazards

None.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

BIPHENYL-3,3',4,4'-TETRAYL-TETRAAMINE		<5%
CAS number: 91-95-2	EC number: 202-110-6	
Classification Muta. 2 - H341 Carc. 1B - H350	Classification (67/548/EEC or 1999/45/EC) Carc. Cat. 2;R45 Muta. Cat. 3;R68	
HYDROCHLORIC ACID		<5%
CAS number: 7647-01-0	EC number: 231-595-7	
Classification Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335	Classification (67/548/EEC or 1999/45/EC) C;R34 Xi;R37	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments No other ingredients, including those with occupational exposure limits, present above the level of disclosure

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues. If breathing stops, provide artificial respiration. Get medical attention immediately.

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Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention. Show this Safety Data Sheet to the medical personnel.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	May cause coughing or mild irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Water spray. Foam. Powder.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	The product is non-combustible. Irritating gases or vapours. Hydrogen chloride (HCl). Oxides of nitrogen. 7.2
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5.3. Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Stop leak if possible without any risk. Remove or isolate all sources of ignition. Wear protective clothing as described in Section 8 of this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	Avoid the spillage or runoff entering drains, sewers or watercourses.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Usage precautions Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients. Avoid inhalation of vapours/spray and contact with skin and eyes. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Refer to product label.

Storage class Refer to product datasheet.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

HYDROCHLORIC ACID

Long-term exposure limit (8-hour TWA): WEL 1 ppm 2 mg/m³ gas and aerosol mists

Short-term exposure limit (15-minute): WEL 5 ppm 8 mg/m³ gas and aerosol mists

WEL = Workplace Exposure Limit

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended.

Other skin and body protection

Wear apron or protective clothing in case of contact. Wash contaminated clothing before reuse.

Hygiene measures

Provide eyewash station. Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

Respiratory protection

No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Liquid.

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Colour	Colourless.
Odour	Odourless.
Melting point	~ 0°C°C
Initial boiling point and range	<100 @°C @ 760 mm Hg
Flash point	Not applicable.
Evaporation rate	Not determined.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	~1 g/ml @ °C
Solubility(ies)	Not determined. Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not applicable.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of the following substances: Carbon. Nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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Toxicological effects	No information available.
<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	1,834.0
Species	Mouse
Notes (oral LD₅₀)	7.2
<u>Skin corrosion/irritation</u>	
Human skin model test	Not determined.
Extreme pH	7.2
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not determined.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Not determined.
<u>Carcinogenicity</u>	
Carcinogenicity	Not determined.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Not determined.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not determined.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not determined.
<u>Aspiration hazard</u>	
Aspiration hazard	Not determined.
<u>Inhalation</u>	
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
<u>Ingestion</u>	
Ingestion	Harmful if swallowed.
<u>Skin contact</u>	
Skin contact	Liquid may irritate skin. Not a skin sensitiser.
<u>Eye contact</u>	
Eye contact	Vapour or spray in the eyes may cause irritation and smarting.
<u>Acute and chronic health hazards</u>	
Acute and chronic health hazards	Known or suspected mutagen. Known or suspected carcinogen for humans.
Route of exposure	Ingestion. Skin and/or eye contact

SECTION 12: Ecological Information

Ecotoxicity There are no data on the ecotoxicity of this product.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

12.2. Persistence and degradability

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Persistence and degradability There are no data on the degradability of this product. This product is not expected to be readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation. The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not determined.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not expected to be PBT or vPvB

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

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

Road transport notes Not classified.

Rail transport notes Not classified.

Sea transport notes Not classified.

Air transport notes Not classified.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

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Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Guidance	Workplace Exposure Limits EH40. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	Only trained personnel should use this material.
Revision date	20/09/2018
Revision	6
Supersedes date	09/08/2017
SDS number	10185
Risk phrases in full	R34 Causes burns. R37 Irritating to respiratory system. R45 May cause cancer. R68 Possible risk of irreversible effects.
Hazard statements in full	H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H335 May cause respiratory irritation. H341 Suspected of causing genetic defects. H350 May cause cancer.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.