Cell Palette Red AP Chromogen Kit
Material Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1. Product identifier

Product:	Cell Palette Red AP Chromogen Kit
Catalog No.:	CPAR-050 CPAR-200
Kit Component:	Red AP Chromogen (50x)

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

Recommended use:	Immunohistochemistry (IHC)

1.3. Details of the supplier of the safety data sheet

MANUFACTURER	EMAIL ADDRESS:
Cell IDx, Inc. 6197 Cornerstone Court E, Ste 102 San Diego, CA 92121	info@cellidx.com

1.4. Emergency tselephone number

9 am-5 pm PST, M-F 858.452.5800

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the mixture

OSHA/HCS status	Skin irritation (Category 2), H315 Eye irritation (Category 2A), H319

2.2 Label elements

Signal Word Warning

Hazard Statements

H315	Causes skin irritation
H319	Causes eye irritation
H335	May cause respiratory irritation

Precautionary Statements

P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective clothing, gloves, eye and face protection.
P308+313	IF exposed or concerned: Get medical advice/attention.
P234	Keep only in original container.
264	Wash hands thoroughly after handling.
P390	Absorb spillage to prevent material damage.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical attention.

Storage

P406	Store in a corrosion resistant container with a resistant inner liner.

Disposal

P501	Dispose of in an approved waste disposal plant

2.3 Other information

None

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Component	CAS number	EC number	%
Naphthol-AS-MX-phosphate sodium salt	1596-56-1	216-480-1	< = 100%

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: FIRST AID MEASURES

4.1. Potential acute health effects

Eye contact	Causes eye irritation.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

4.2. Over-exposure signs/symptoms

Eye contact	Adverse symptoms may include the following: irritation watering redness
Inhalation	No specific data
Skin contact	No specific data
Ingestion	No specific data

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments

If inhaled	Move person to fresh air. Give artificial respiration if not breathing. Consult physician
If skin contact	Wash generously with soap and water. Consult physician.
If eye contact	Rinse with water for at least 15 minutes. Consult physician
If swallowed	NEVER give anything to unconscious person. Rise mouth with water. Consult physician

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Fire can be extinguished using: Water spray. Foam. Powder.

5.2. Special hazards arising from the substance or mixture

Not combustible

Decomposition products may include

Carbon oxides, nitrogen oxies, phosphorus oxides.

5.3. Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Wear appropriate protective equipment and self-containing breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep 4-unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist.

Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Emergency responders

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2. Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Clean without creating dust. Seep up and shovel product and store in a closed container suitable for storage until disposal

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2. Conditions for safe storage, including any incompatibilities

Specific storage conditions, consult label

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3. 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

Components with workplace control parameters

No substance with occupational exposure limit values

8.2. Exposure controls

Appropriate engineering controls

Wash hands after use before breaks and at the end of the workday. Keep with good hygiene and safety practices.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure hey comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Form: Liquid Color: Amber
Odor	not available
Odor threshold	not available
pH	not available

Melting point	not available
Boiling point	not available
Flash point	not available
Evaporation rate	not available
Flammability (solid, gas)	not available
Lower and upper explosive (flammable) limits	not available
Vapor pressure	not available
Vapor density	not available
Relative density	not available
Solubility	Soluble in cold and hot water
Partition coefficient: n-octanol/water	not available
Auto-ignition temperature	not available
Decomposition temperature	not available
Viscosity	not available

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2. Chemical stability

The product is stable under recommended storage conditions

10.3. Possibility of hazardous reactions

No specific data

10.4. Conditions to avoid

No specific data

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Under fire conditions: carbon oxides, nitrogen oxides, phosphorus oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Toxicological information

Acute toxicity	No information available
Irritation/Corrosion	No information available
Sensitization	No information available
Mutagenicity	No information available
Carcinogenicity	No information available
Reproductive toxicity	No information available
Teratogenicity	No information available
Specific target organ toxicity (repeated exposure)	No information available
Aspiration hazard	No information available

11.2. Routes of entry and health effects

Information on the likely routes of exposure	Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact	Causes eye irritation
Inhalation	May cause respiratory irritation
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Not available

12.2. Persistence and degradability

Not available

12.3. Bio accumulative potential

Not available

12.4. Mobility in soil

Not available

12.5. Other adverse effects

Not determined

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Generation of waste should be avoided or minimized whenever possible. Dispose of product, solutions, and by-products according to the requirements of environmental protection and waste disposal legislation and any regional authority requirements. Disposed of unused product as if unopened. Waste should not be disposed of untreated into a sewage system unless fully compliant with the requirements of all authorities with jurisdiction. Recycle waste packaging whenever possible. Take care when handling emptied containers that have not been cleaned or rinsed out. Empty containers may retain some product residues. DO NOT allow spilled material and runoff to contact drains, sewers, soil, or waterways.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations

SECTION 14: TRANSPORTATION INFORMATION

14.1. DOT (US)

Not a dangerous good

14.2. IMDG

Not a dangerous good

14.3. IATA

Not a dangerous good

SECTION 15: REGULATORY INFORMATION

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

No data available

15.2. SARA 302/304

No chemicals part of this material are required to be reported per SARA Title III, Section 302

15.3. SARA 313

No chemical part of this material are required to be reported per SARA Title III, Section 313

15.4. SARA 311/312

Acute Health Hazard

15.5. SARA 313

No data available

15.6. State regulations

Massachusetts

The following components are listed: None

Pennsylvania

The following components are listed: 3-(Phosphonooxy)-N-(2,4-xylyl)naphthalene-2-carboxamide (CAS 1596-56-1)

New York

The following components are listed: 3-(Phosphonooxy)-N-(2,4-xylyl)naphthalene-2-carboxamide (CAS 1596-56-1)

New Jersey

The following components are listed: None

SECTION 16: OTHER INFORMATION

Disclaimer

This information relates only to the specific material designated ane may not be valid for such material used in combination with any other materials or in any process. Such information i, 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.

Cell Pallete Red AP Buffer
Material Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1. Product identifier

Product:	Cell Palette Red AP Chromogen Kit
Catalog No.:	CPAR-050 CPAR-200
Kit Component:	AP-Red Buffer (1X)

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

Recommended use:	Immunohistochemistry (IHC)

1.3. Details of the supplier of the safety data sheet

MANUFACTURER	EMAIL ADDRESS:
Cell IDx, Inc. 6197 Cornerstone Court E, Ste 102 San Diego, CA 92121	info@cellidx.com

1.4. Emergency tselephone number

9 am-5 pm PST, M-F 858.452.5800

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the mixture

Hazard Class	Category	Category	Hazard Statements (H-Statements)
N/A	N/A	N/A	This product has been classified as non-hazardous based on the physical and/or chemical nature and/or concentration of ingredients

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin corrosion (Category 1B), H314
Serious eye Damage (Category 1), H318
Reproductive toxicity (Category 1B), H360

2.2. Label elements

Danger

H-Statements	N/A
P-Statements	N/A
EUH-Statements	N/A

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Component 1

Name	Identifiers	Classification according to CLP	Classification (for pure substances)
Hydrochloric Acid	EC: 231-585-7 CAS: 7647-01-0	Concentration <0.5%	N/A

Component 2

Name	Identifiers	Classification according to CLP	Classification (for pure substances)
Proclin 300	EC: 613-167-00-5 CAS: 55965-84-9	Concentration <0.1%	R43

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Remove to fresh air.

Skin contact: Wash thoroughly with soap and water.

Eye Contact: Flush eyes with water as a precaution.

Ingestion: Do not induce vomiting. Wash out mouth with water.

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

Most important symptoms and effects, both acute and delayed
N/A

4.3 Indication of immediate medical attention and special treatment needed, if necessary
N/A

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Extinguish using suitable agents

5.2. Special advice for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Wear protective clothing to prevent contact with eyes and skin. Ensure adequate ventilation. Collect on absorbent material and dispose of according to federal, state and local environmental regulations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Use only with adequate ventilation. Wear eye protection and compatible chemical-resistant gloves. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities
Store at 2^{O}-8^{O}C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Controls

Respiratory Controls	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator
Skin and Body Protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Eye/Face Protection	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
Hygiene Measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Liquid
Odor:	None
pH:	8.6
Boiling point:	N/A
Melting point:	N/A
Flash point:	N/A
Auto flammability:	N/A
Vapor Pressure:	N/A
Relative density:	N/A
Solubility:	N/A

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
N/A

10.2. Chemical stability
Stable under recommended storage conditions

10.3. Possibility of hazardous reactions
N/A

10.4. Conditions to avoid
Strong prolonged heat and contact with incompatible materials

10.5. Incompatible materials
Strong Acids, Strong Bases, Strong Oxidizers, Metals and Metallic compounds

10.6. Hazardous decomposition products
N/A

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Component 1

Hydrochloric Acid (in pure form): oral toxicity (LD50 900 mg/kg (rabbit)

Common route of entry	Ingestion
Potential Effects of Acute Exposure	N/A
Potential Effects of Chronic Exposure	N/A
Symptoms of Overexposure	N/A

Component 2

Proclin 300 (in pure form): LD50 (oral-rat): 3600 mg/kg (100%)

Common route of entry	Ingestion
Potential Effects of Acute Exposure	The product contains <0.1% of Proclin 300TM which corresponds to <0.0015% of its active ingredients. At this low final concentration, this biocidal preservative is irritating to eyes and skin and may be detrimental if enough is ingested (quantities above those found in the kit).
Potential Effects of Chronic Exposure	It is a skin sensitizer; prolonged or repeated exposure may cause allergic reaction in certain sensitive individuals.
Symptoms of Overexposure	Allergic skin reaction

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
N/A

12.2. Persistence and degradability
N/A

12.3. Bio accumulative potential
N/A

12.4. Mobility in soil
N/A

12.5. Other adverse effects
N/A

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods
The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

14.1. UN number/UN Proper Shipping Name
N/A.

14.2. DOT (US)
N/A.

14.3. Transport hazard class(es)
N/A..

14.4. IMDG
N/A.

14.5. IATA
N/A.

SECTION 15: REGULATORY INFORMATION

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

SARA 302 Component
No chemicals in this material are subject to the reporting requirements.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

SARA 311/312 Component
Acute Health Hazard, Chronic Health Hazard

SECTION 16: OTHER INFORMATION

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Company shall not be held liable for any damage resulting from handling
or from contact with the above product.