SZABO SCANDIC

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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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SANTA CRUZ BIOTECHNOLOGY, INC.

Phosphatase Inhibitor Cocktail B: sc-45045

BACKGROUND

Crude cell extracts contain a number of endogenous enzymes, such as proteases and phosphatases, which are capable of modifying the proteins present in the extract. The best way to improve the yield of intact proteins is to add inhibitors of these enzymes known to be present in the source material. Phosphatase Inhibitor Cocktail B has been optimized and tested for tyrosine protein phosphatases, acid and alkaline phosphatases.

REFERENCES

1. Jain, M.K. 1982. Handbook of Enzyme Inhibitors. New York: John Wiley and Sons, 189-190.
2. Beynon, R.J. and Bond, J.S (eds.). 1989. Proteolytic Enzymes: A Practical Approach. Oxford, UK. IRL Press, 207.

PRODUCT

Phosphatase Inhibitor Cocktail B is supplied as a white lyophilized solid. Each vial contains 200 mM Imidazole, 100 mM Sodium Fluoride, 115 mM Sodium Molybdate, 100 mM Sodium Orthovanadate and 400 mM Sodium Tartrate Dihydrate. Individual components of this formulation have specific inhibitory properties. A description of each inhibitor is given below.

Imidazole inhibits alkaline phosphatases.

Sodium Fluoride inhibits acid phosphatases.

Sodium Molybdate inhibits acid and phosphoprotein phosphatases.

Sodium Orthovanadate inhibits a number of ATPases, protein Tyrosine phosphatases and other phosphate-transferring enzymes.

Sodium Tartrate Dihydrate inhibits acid phosphatases.

PRECAUTIONS

Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

RECOMMENDED USAGE

One ml of Phosphatase Inhibitor Cocktail B will inhibit phosphatase activities found in the 100,000 x g supernatant from human placenta, bovine liver, rabbit muscle, A431 or Jurkat cell extracts at a protein concentration of approximately 5 mg/ml.

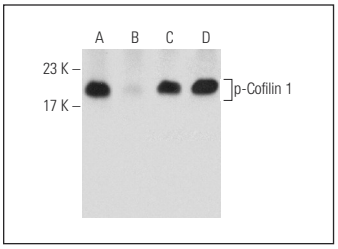
One ml of cocktail solution is used to prepare 100 ml of supernatant that contains a maximum of 500 mg of protein. Therefore, 1 ml of cocktail should be added per 500 mg of protein extracted from the tissue used, or 1 ml of cocktail solution per 100 ml of extraction buffer.

Phosphatase Inhibitor Cocktail B has been tested on cell extracts from various animal tissues (cytosolic and Triton X-100 extracts of bovine liver and human placenta, cytosolic extract of rabbit muscle, Triton X-100 extracts of A432 and Jurkat cells). It has been found to inhibit phosphatase activities as measured with p-nitrophenyl phosphate (pNPP) at pH 7.5, and Tyrosine protein phosphatase activity as measured by dephosphorylation of 32P-Tyr-Myelin basicprotein at pH 7.6.

STORAGE AND RECONSTITUTION

Shipped on wet ice. Store at -20° C. Hygroscopic. Reconstitute each vial with 1 ml deionized H_2O to obtain a 1 ml stock solution. Recommended usage is a 100-fold dilution. Following reconstitution, aliquot and freeze (-20° C). Stock solutions are stable for up to 1 month at -20° C. Stable for one year from date of shipment as supplied.

DATA



Phosphatase Inhibitor Cocktail B: sc-45045. Western blot analysis of Cofilin 1 phosphorylation in K-562 (**A**), lambda phosphatase (sc-200312) treated K-562 (**B**), Phosphatase Inhibitor Cocktail B treated K-562 (**C**) and Phosphatase Inhibitor Cocktail B and lambda phosphatase treated K-562 (**D**). Antibody tested: p-Cofilin 1 (H-2): sc-271923. Note inhibition of lambda phosphatase by Phosphatase Inhibitor Cocktail B in lane **D**.

SELECT PRODUCT CITATIONS

1. Ikovitch, D., et al. 2008. Antitumor effects of Mucin 1/sec involves the modulation of urokinase-type plasminogen activator and signal transducer and activator of transcription 1 expression in tumor cells. Cancer Res. 68: 2427-2435.
2. Wagner, M.W., et al. 2008. Role of c-Abl kinase in DNA mismatch repair-dependent G_2 cell cycle checkpoint arrest responses. J. Biol. Chem. 283: 21382-21393.
3. van Kester, M.S., et al. 2008. Cucurbitacin I inhibits Stat3 and induces apoptosis in Sézary cells. J. Invest. Dermatol. 128: 1691-1695.
4. Huang, C.C., et al. 2009. A surface of the kinase domain critical for the allosteric activation of G protein-coupled receptor kinases. J. Biol. Chem. 284: 17206-17215.
5. Nazarian, R., et al. 2010. Melanomas acquire resistance to B-RAF(V600E) inhibition by RTK or N-RAS upregulation. Nature 468: 973-977.
6. Lomonosova, Y.N., et al. 2012. Attenuation of unloading-induced rat soleus atrophy with the heat-shock protein inducer 17-(allylamino)-17-demethoxygeldanamycin. FASEB J. 26: 4295-4301.
7. Moore, A.S., et al. 2012. Selective FLT3 inhibition of FLT3-ITD$^+$ acute myeloid leukaemia resulting in secondary D835Y mutation: a model for emerging clinical resistance patterns. Leukemia 26: 1462-1470.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

Phosphatase Inhibitor Cocktail B: sc-45045

The Power to Question

MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Information

Product Name: Phosphatase Inhibitor Cocktail B
Catalog Number: sc-45045

Company: Santa Cruz Biotechnology, Inc.
Address: 2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #
PHOSPHATASE INHIBITOR COCKTAIL	None

Ingredient Name	CAS #	R-Phrases
Sodium Orthovanadate	13721-39-6	R20/21/22
Imidazole	288-32-4	R22,R34
Sodium Fluoride	7681-49-4	R25,R32,R36/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Toxic. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

HMIS RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 0
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.
INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
N/A
AUTOIGNITION TEMP
N/A
FLAMMABILITY
N/A
EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.
FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

METHODS FOR CLEANING UP
Scoop up material and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
STORAGE
Suitable: Keep tightly closed.
Store at 2-8°C

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges.
Hand: Protective gloves.
Eye: Chemical safety goggles.
GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance Physical State: Solid
Color: White

Property	Value
Molecular Weight	N/A
pH	N/A
BP/BP Range	N/A
MP/MP Range	N/A
Freezing Point	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
SG/Density	N/A
Bulk Density	N/A
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	N/A
Refractive Index	N/A
Optical Rotation	N/A
Solubility	Water

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable.
Materials to Avoid: Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.
HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.
SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. This material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.
IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION
S: 24/25-23
Safety Statements: Avoid contact with skin and eyes. Do not inhale.

US CLASSIFICATION AND LABEL TEXT
Indication of Danger: Toxic.
Risk Statements: Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: No

Section 16 - Other Information

The above information is believed to be correct but does not purport to be complete and should be usedonly as a guide. The burden of safe use of this material rests entirely with the user.

Emergency Contact:
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800
or Luis Yanez 831.251.2170

1/18/2010