

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: CN06

NAME: Rho PATHWAY INHIBITOR I, Rho KINASE (ROCK) INHIBITOR Y-27632

USE: LABORATORY CHEMICALS

MANUFACTURER/SUPPLIER:

CYTOSKELETON INC.

1830 S. Acoma St.

Denver, CO 80223

PHONE: 303-322-2254

FAX: 303-322-2257

24H EMERGENCY TOLL-FREE NUMBER: CALL CHEMTREC DAY OR NIGHT

WITHIN USA AND CANADA: 1-800-424-9300

OUTSIDE USA AND CANADA: +1 703-527-3887 (COLLECT CALLS ACCEPTED)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

DANGEROUS COMPONENTS:

THIS PRODUCT CONTAINS THE SUBSTANCES LISTED BELOW WHICH ARE DEFINED AS DANGEROUS SUBSTANCES OR HAZARDOUS CHEMICALS AS DEFINED IN EUROPEAN COMMUNITY DIRECTIVES 67/548/EEC OR 1999/45/EC AND HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.

(R)-(+)-TRANS-4-(1-AMINOETHYL)-N-(4-PYRIDYL)	CAS#: 146986-50-7	<1%
CYCLOHEXANECARBOXAMIDE DIHYDROCHLORIDE	EINECS#: NONE	
MONOHYDRATE		

NO EU HAZARD SYMBOL LETTERS OR "R" PHRASES

HARMLESS COMPONENTS:

THIS PRODUCT CONTAINS THE SUBSTANCES LISTED BELOW WHICH ARE NOT DEFINED AS DANGEROUS SUBSTANCES OR HAZARDOUS CHEMICALS AS DEFINED IN EUROPEAN COMMUNITY DIRECTIVES 67/548/EEC OR 1999/45/EC AND HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.

WATER	CAS#: 7732-18-5	>99%
	EINECS#: 231-791-2	
SUCROSE	CAS#: 57-50-1	5%
	EINECS#: 200-334-9	
DEXTRAN	CAS#: 9004-54-0	1%
	EINECS#: 232-677-5	

NO EU HAZARD SYMBOL LETTERS OR "R" PHRASES

SECTION 3. HAZARDS IDENTIFICATION

GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS (GHS):

SYMBOL: NO SYMBOL

HAZARD CATEGORY: 5: ACUTE TOXICITY

SIGNAL WORD: WARNING

HAZARD STATEMENT: H303 + H313 + H333: MAY BE HARMFUL IF SWALLOWED, IN CONTACT WITH SKIN OR IF INHALED

GHS PRECAUTIONARY STATEMENTS:

PREVENTION: P281: USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED

RESPONSE: P308 + P313: IF EXPOSED OR CONCERNED: GET MEDICAL

ADVICE/ATTENTION. P312: CALL A POISON CENTER/DOCTOR/PHYSICIAN IF YOU FEEL UNWELL.

STORAGE: P403 + P233: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

DISPOSAL: P501: DISPOSE OF CONTENT/CONTAINER IN ACCORDANCE WITH LOCAL REGULATIONS.

REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS (REACH):

SYMBOL: NO SYMBOL

SYMBOL LETTER: NONE APPLICABLE

HAZARD: NONE APPLICABLE

RISK PHRASE: NONE APPLICABLE

SECTION 4. FIRST-AID MEASURES

AFTER INHALATION: SUPPLY FRESH AIR IMMEDIATELY. IF BREATHING IS DIFFICULT OR STOPS, SEEK IMMEDIATE MEDICAL ATTENTION. SYMPTOMS OF EXPOSURE: POSSIBLE RESPIRATORY TRACT AND MUCOUS MEMBRANE IRRITATION

AFTER SKIN CONTACT: IMMEDIATELY WASH SKIN WITH MILD SOAP AND RINSE WITH COPIOUS AMOUNTS OF WATER. IF THIS CHEMICAL PENETRATES CLOTHING, IMMEDIATELY REMOVE THE CLOTHING AND FLUSH THE SKIN WITH WATER. SEEK MEDICAL ATTENTION IMMEDIATELY. SYMPTOMS OF EXPOSURE: POSSIBLE SKIN IRRITATION WITH REPEATED OR PROLONGED EXPOSURE

AFTER EYE CONTACT: RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. CONSULT PHYSICIAN IMMEDIATELY. SYMPTOMS OF EXPOSURE: POSSIBLE EYE IRRITATION, REDNESS AND LACRIMATION

AFTER SWALLOWING: SEEK MEDICAL ATTENTION IMMEDIATELY. NEVER GIVE AN UNCONSCIOUS PERSON ANYTHING BY MOUTH. SYMPTOMS OF EXPOSURE: POSSIBLE GASTROINTESTINAL IRRITATION CAUSING NAUSEA AND VOMITING

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING AGENTS: USE EXTINGUISHING MEDIA APPROPRIATE FOR THE SURROUNDING FIRE. THIS PRODUCT IS COMPATIBLE WITH COMMERCIALY AVAILABLE EXTINGUISHING MEDIA.

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: THIS PRODUCT DOES NOT REQUIRE THE USE OF ANY ADDITIONAL FIRE FIGHTING EQUIPMENT BEYOND WHAT IS APPROPRIATE TO THE SURROUNDING FIRE.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY GOGGLES, GLOVES, CHEMICAL-RESISTANT BOOTS (SEE SECTION 8).

ENVIRONMENTAL PRECAUTIONS: COLLECT AND DISPOSE OF CONTAMINATED MATERIALS ACCORDING TO INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT ALLOW TO ENTER DRAINS/SEWERS/SURFACE OR GROUND WATER OR SOIL.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP: FOR SMALL SPILLS: IDENTIFY THE SPILLED MATERIAL AND BARRICADE THE SPILL AREA AND NOTIFY OTHERS IN SURROUNDING AREA. CONTROL ALL SOURCES OF IGNITION IF THE SUBSTANCE IS FLAMMABLE. DON THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). CONTROL THE MOVEMENT OF THE SPILLED PRODUCT (INTO DRAINS, SOIL, ACROSS FLOORS, ETC) WITH ABSORBENT SPILL MATERIALS. COLLECT CONTAMINATED SPILL MATERIAL AND PLACE IN CONTAINER MEETING APPROPRIATE U.N. PACKAGING REQUIREMENTS. DECONTAMINATE USED EQUIPMENT AND AFFECTED SPILL AREA APPROPRIATELY. FOR LARGE SPILLS: IN ADDITION TO SMALL SPILL PRECAUTIONS, DETERMINE PERSONNEL EVACUATION DISTANCES AND NOTIFY APPROPRIATE AUTHORITIES IF NECESSARY.

SECTION 7. HANDLING AND STORAGE

HANDLING: SEEK APPROPRIATE TRAINING TO SAFELY HANDLE THIS PRODUCT UNDER NORMAL CONDITIONS. USE THE RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8) TO PREVENT CHEMICAL EXPOSURE. WASH HANDS WITH SOAP AND WATER BEFORE EATING, DRINKING, OR TOUCHING COMMON ITEMS TO PREVENT CROSS-CONTAMINATION. USE THIS PRODUCT WITH ADEQUATE VENTILATION. SEE PRODUCT TECHNICAL DATASHEET.

STORAGE: SEE PRODUCT TECHNICAL DATASHEET.

SPECIFIC USE: SEE PRODUCT TECHNICAL DATASHEET.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

(R)-(+)-TRANS-4-(1-AMINOETHYL)-N-(4-PYRIDYL)CYCLOHEXANECARBOXAMIDE DIHYDROCHLORIDE MONOHYDRATE

OSHA PEL: NOT LISTED

NIOSH REL: NOT LISTED

ACGIH TLV: NOT LISTED
OTHER: NONE

ENGINEERING CONTROLS

NORMAL HANDLING CONDITIONS: GENERAL ROOM VENTILATION IS ADEQUATE FOR THIS PRODUCT

EMERGENCY RESPONSE CONDITIONS: PROVIDE NEGATIVE PRESSURE VENTILATION

RESPIRATORY PROTECTION

NORMAL HANDLING CONDITIONS: USE APPROPRIATE RESPIRATORY PROTECTION

EMERGENCY RESPONSE CONDITIONS: USE APPROPRIATE RESPIRATORY PROTECTION

EYE PROTECTION

NORMAL HANDLING CONDITIONS: SAFETY GLASSES WITH SIDE SHIELDS

EMERGENCY RESPONSE CONDITIONS: CHEMICAL SPLASH GOGGLES OR OTHER FACE PROTECTION AS APPROPRIATE

SKIN PROTECTION

NORMAL HANDLING CONDITIONS: LABORATORY COAT, ADEQUATE CHEMICAL-RESISTANT GLOVES

EMERGENCY RESPONSE CONDITIONS: CHEMICALLY RESISTANT BOOTS, CLOTHES, AND IMPERMEABLE GLOVES AS APPROPRIATE

ENVIRONMENTAL EXPOSURE CONTROLS

NORMAL HANDLING CONDITIONS: NOT AVAILABLE

EMERGENCY RESPONSE CONDITIONS: NOT AVAILABLE

OTHER EQUIPMENT: SAFETY SHOWER, EYEWASH STATIONS, AND HAND WASHING EQUIPMENT SHOULD BE AVAILABLE CLOSE TO THE WORK AREA AS NEEDED

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: SOLID (LYOPHILIZED POWDER)

ODOR: NOT AVAILABLE

ODOR THRESHOLD: NOT AVAILABLE

pH: NOT AVAILABLE

MELTING POINT/FREEZING POINT: ESSENTIALLY THAT OF WATER

INITIAL BOILING POINT AND BOILING RANGE: ESSENTIALLY THAT OF WATER

FLASH POINT: NOT AVAILABLE

EVAPORATION RATE: NOT AVAILABLE

FLAMMABILITY (SOLID/GAS): NOT AVAILABLE

EXPLOSIVE LIMITS: LEL: NOT AVAILABLE UEL: NOT AVAILABLE
VAPOR PRESSURE: NOT AVAILABLE
VAPOR DENSITY: NOT AVAILABLE
RELATIVE DENSITY (WATER = 1): ESSENTIALLY THAT OF WATER
SOLUBILITY: SOLUBLE IN WATER
PARTITION COEFFICIENT (N-OCTANOL/WATER): NOT AVAILABLE
AUTO IGNITION TEMPERATURE: NOT AVAILABLE
DECOMPOSITION TEMPERATURE: NOT AVAILABLE
OXIDIZING PROPERTIES: NONE
VISCOSITY, CENTIPOISE: NOT AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: PRODUCT IS STABLE UNDER NORMAL OPERATING CONDITIONS AND USE AS DESCRIBED IN THE PRODUCT TECHNICAL DATASHEET.

CONDITIONS TO AVOID: EXTREME TEMPERATURES.

INCOMPATIBLE MATERIALS TO AVOID: STRONG ACIDS OR BASES AND STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS: HEATING TO DECOMPOSITION TEMPERATURE MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

TO THE BEST OF OUR KNOWLEDGE, THE TOXICOLOGICAL PROPERTIES OF THIS PRODUCT HAVE NOT BEEN THOROUGHLY INVESTIGATED.

ACUTE TOXICITY: NO DATA AVAILABLE

SKIN CORROSION/IRRITATION: NO DATA AVAILABLE

SERIOUS EYE DAMAGE/EYE IRRITATION: NO DATA AVAILABLE

RESPIRATORY OR SKIN SENSITIZATION: NO DATA AVAILABLE

GERM CELL MUTAGENICITY: NO DATA AVAILABLE

CARCINOGENICITY: NO DATA AVAILABLE

REPRODUCTIVE TOXICITY: NO DATA AVAILABLE

STOST-SINGLE EXPOSURE: NO DATA AVAILABLE

STOST-REPEATED EXPOSURE: NO DATA AVAILABLE

ASPIRATION HAZARD: NO DATA AVAILABLE

CARCINOGENICITY: CARCINOGENETIC INFORMATION FOR THIS PRODUCT AS A WHOLE DOES NOT EXIST. BELOW IS DATA FOR THE INDIVIDUAL COMPONENTS:

(R)-(+)-TRANS-4-(1-AMINOETHYL)-N-(4-PYRIDYL)CYCLOHEXANECARBOXAMIDE
DIHYDROCHLORIDE MONOHYDRATE

OSHA: NOT LISTED

NTP: NOT LISTED

IARC: NOT LISTED

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY: NO DATA AVAILABLE

MOBILITY: NO DATA AVAILABLE

PERSISTENCE AND DEGRADATION: NO DATA AVAILABLE

BIO ACCUMULATIVE POTENTIAL: NO DATA AVAILABLE

RESULTS OF PBT ASSESSMENT: NO DATA AVAILABLE

OTHER ADVERSE EFFECTS: NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

SUBSTANCE: CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. 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 INTERNATIONAL, FEDERAL, STATE AND LOCAL AUTHORITY REQUIREMENTS. AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

CONTAMINATED PACKAGING: DISPOSE OF AS UNUSED PRODUCT IN COMPLIANCE WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL LEGISLATION AND ANY INTERNATIONAL, FEDERAL, STATE AND LOCAL AUTHORITY REQUIREMENTS.

SECTION 14. TRANSPORT INFORMATION

UN NUMBER: NOT LISTED

CLASS: NOT LISTED

PROPER SHIPPING NAME: NOT LISTED

PACKING GROUP: NOT LISTED

MARINE POLLUTANT: NOT LISTED

OTHER APPLICABLE INFORMATION: NONE

SECTION 15. REGULATORY INFORMATION

AUSTRALIA:

HAZCHEM CODE: NOT LISTED

CALIFORNIA:

POISONS SCHEDULE NUMBER: NOT LISTED

CANADA:

PROPOSITION 65: NOT LISTED

EUROPEAN UNION:

WHMIS: NOT LISTED

REACH: CHEMICAL SAFETY ASSESSMENT FOR THE SUBSTANCE OR SUBSTANCES IN THE PREPARATION NOT REQUIRED

SUBSTANCES OF VERY HIGH CONCERN (SVHC): THIS PRODUCT DOES NOT CONTAIN SVHCS IN CONCENTRATIONS ABOVE 0.1% WEIGHT/WEIGHT

CATEGORY OF DANGER: NONE APPLICABLE

RISK PHRASES: NONE APPLICABLE

SAFETY PHRASES: S7/9: KEEP CONTAINER TIGHTLY CLOSED AND IN A WELL-VENTILATED PLACE. S20/S21: WHEN USING DO NOT EAT, DRINK OR SMOKE. S26: IN

CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. S27/S28: AFTER CONTACT WITH SKIN, TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING AND WASH IMMEDIATELY WITH PLENTY OF SOAP AND TEPID WATER. S29/35: DO NOT EMPTY INTO DRAINS. DISPOSE OF THIS MATERIAL AND ITS CONTAINER IN A SAFE WAY. S36/37/39: WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION. S45: IN CASE OF ACCIDENT OR IF YOU FEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY.

OECD/HIGH PRODUCTION VOLUME (HPV) CHEMICALS:
WATER

RoHS: THIS PRODUCT DOES NOT CONTAIN RoHS LISTED SUBSTANCES IN CONCENTRATIONS ABOVE THE ESTABLISHED THRESHOLDS

JAPAN:

POISONOUS AND DELETERIOUS SUBSTANCES
CONTROL LAW: NOT LISTED

SECTION 16. OTHER INFORMATION

THIS INFORMATION IS BASED ON OUR PRESENT KNOWLEDGE. HOWEVER, THIS SHALL NOT CONSTITUTE A GUARANTEE FOR ANY SPECIFIC PRODUCT FEATURES AND SHALL NOT ESTABLISH A LEGALLY VALID CONTRACTUAL RELATIONSHIP. THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT, BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. CYTOSKELETON INC. SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM CONTACT WITH THE ABOVE PRODUCT.

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