

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: BK150
NAME: TOTAL RhoA ELISA KIT
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

DESCRIPTION: MIXTURE OF THE SUBSTANCES/COMPOUNDS LISTED BELOW WITH EITHER HARMLESS CHEMICALS OR HAZARDOUS CHEMICALS AT <1% IN PROPRIETARY SOLUTIONS.

ANTIGEN	CAS#: PROPRIETARY	C; N; R35/50/53; S24/25	1%
PRESENTING	EINECS: PROPRIETARY	S26/36/37/39/45/61	
BUFFER			
(PART# GL39)			

ADDITIONAL INFORMATION: FOR THE WORDING OF THE LISTED SAFETY AND RISK PHRASES REFER TO SECTION 15

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW FOR LYSIS BUFFER (PART# GL39)

OSHA HAZARDS
TARGET ORGAN EFFECT, CORROSIVE, CARCINOGEN

TARGET ORGANS
CENTRAL NERVOUS SYSTEM

SIGNAL WORD DANGER

FOR TOTAL KIT:

NFPA RATINGS (SCALE 0-4)

FIRE = 1
HEALTH = 3
REACTIVITY = 0

OSHA RATINGS

FIRE = 1
HEALTH = 3

SECTION 4. FIRST-AID MEASURES

AFTER INHALATION: SUPPLY FRESH AIR. IF NOT BREATHING, IF BREATHING IS IRREGULAR OR IF RESPIRATORY ARREST OCCURS, PROVIDE ARTIFICIAL RESPIRATION. CONSULT PHYSICIAN IN CASE OF COMPLAINTS

AFTER SKIN CONTACT: IMMEDIATELY RINSE WITH WATER FOR AT LEAST 15 MINUTES. CONSULT PHYSICIAN IMMEDIATELY

AFTER EYE CONTACT: REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. THEN CONSULT PHYSICIAN

AFTER SWALLOWING: DO NOT INDUCE VOMITING. DRINK COPIOUS AMOUNTS OF WATER AND PROVIDE FRESH AIR. CALL FOR PHYSICIAN IMMEDIATELY WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES

KIT COMPONENTS ARE NOT FLAMMABLE OR COMBUSTIBLE

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING AGENTS: CARBON DIOXIDE, EXTINGUISHING POWDER OR WATER SPRAY. FIGHT LARGER FIRES WITH WATER SPRAY OR ALCOHOL RESISTANT FOAM.

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: MOUNT RESPIRATORY PROTECTIVE DEVICE PREVENT CONTACT WITH SKIN AND EYES

HAZARDOUS COMBUSTION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS - CARBON OXIDES AND HYDROGEN CHLORIDE GAS

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER GLOVES. AVOID DUST FORMATION. AVOID BREATHING VAPORS, MIST OR GAS. INSURE ADEQUATE VENTILATION.

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). USE NEUTRALIZING AGENT. DISPOSE CONTAMINATED MATERIAL AS WASTE ACCORDING TO SECTION 13. ENSURE ADEQUATE VENTILATION.

REFERENCE TO OTHER SECTIONS: SEE SECTION 8 FOR INFORMATION ON PERSONAL PROTECTION EQUIPMENT. SEE SECTION 13 FOR DISPOSAL INFORMATION.

SECTION 7. HANDLING AND STORAGE

HANDLING

PRECAUTIONS FOR SAFE HANDLING: ENSURE GOOD VENTILATION/EXHAUSTION AT THE WORKPLACE. AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOR OR MIST

INFORMATION ABOUT PROTECTION AGAINST EXPLOSIONS AND FIRES: NO SPECIAL PRECAUTIONS ARE NECESSARY.

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: STORE AT 2-8°C.

INFORMATION ABOUT STORAGE IN ONE COMMON STORAGE FACILITY: NO SPECIAL PRECAUTIONS ARE NECESSARY. KEEP TIGHTLY CLOSED AND IN A DRY, WELL-VENTILATED PLACE.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: KEEP RECEPTACLE TIGHTLY SEALED.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENTS WITH LIMIT VALUES THAT REQUIRE MONITORING AT THE WORKPLACE:

FOR PART# GL39

ACGIH TLV
TWA: 1 ppm

OSHA LIMITS FOR AIR CONTAMINANTS
TWA: 1 ppm; 7 mg/m³

NIOSH RECOMMENDED EXPOSURE LIMITS
TWA: 1 ppm; 7 mg/m³

REMARKS: EYE AND UPPER RESPIRATORY TRACT IRRITATION. CONFIRMED ANIMAL CARCINOGEN WITH UNKNOWN RELEVANCE TO HUMANS: THE AGENT IS CARCINOGENIC IN EXPERIMENTAL ANIMALS AT A RELATIVELY HIGH DOSE BY ROUTE(S) OF ADMINISTRATION, AT SITE(S), OF HISTOLOGIC TYPE(S), OR BY MECHANISMS(S) THAT MAY NOT BE RELEVANT TO WORKER EXPOSURE. AVAILABLE EPIDEMIOLOGIC STUDIES DO NOT CONFIRM AN INCREASED RISK OF CANCER IN EXPOSED HUMANS. AVAILABLE EVIDENCE DOES NOT SUGGEST THAT THE AGENT IS LIKELY TO CAUSE CANCER IN HUMANS EXCEPT UNDER UNCOMMON OR UNLIKELY ROUTES OR LEVELS OF EXPOSURE.

GENERAL INFORMATION

PERSONAL PROTECTIVE EQUIPMENT

GENERAL PROTECTIVE AND HYGIENIC MEASURES

KEEP AWAY FROM FOODSTUFFS, BEVERAGES AND FEED

WASH HANDS BEFORE BREAKS AND AT THE END OF WORK
IMMEDIATELY REMOVE ALL SOILED AND CONTAMINATED CLOTHING
AVOID CONTACT WITH THE EYES AND SKIN

BREATHING EQUIPMENT

WHERE AIR-PURIFYING RESPIRATORS ARE APPROPRIATE, USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 OR TYPE P3 RESPIRATOR CARTRIDGES AS A BACK-UP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. DO NOT BREATHE. USE MECHANICAL EXHAUST SYSTEM

PROTECTION OF HANDS PROTECTIVE GLOVES.

THE GLOVE MATERIAL HAS TO BE IMPERMEABLE AND RESISTANT TO THE PRODUCT/SUBSTANCE/PREPARATION. AS THE PRODUCT IS A PREPARATION OF SEVERAL SUBSTANCES, THE RESISTANCE OF THE GLOVE MATERIAL CANNOT BE CALCULATED IN ADVANCE AND THEREFORE HAS TO BE CHECKED PRIOR TO APPLICATION. NO RECOMMENDATION CAN BE GIVEN FOR THE GLOVE MATERIAL FOR THIS PRODUCT. SELECT GLOVE MATERIALS BASE ON PENETRATION TIMES, RATES OF DIFFUSION AND DEGRADATION OF MATERIAL.

MATERIAL OF GLOVES

THE SELECTION OF SUITABLE GLOVES DEPENDS NOT ONLY ON THE MATERIAL BUT ON QUALITY OF MATERIAL AND VARIES FROM MANUFACTURER TO MANUFACTURER.

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.

FOR THE PERMANENT CONTACT OF A MAXIMUM OF 15 MINUTES, GLOVES MADE OF THE FOLLOWING MATERIALS ARE SUITABLE:
NEOPRENE GLOVES

EYE PROTECTION: TIGHTLY SEALED GOGGLES AND FACE SHIELD

BODY PROTECTION: PROTECTIVE WORK CLOTHING

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

FORM: LIQUIDS AND LYOPHILIZED PRODUCTS

COLOR: CLEAR

ODOR: UNDETERMINED

pH-VALUE AT 20°C: 5.5-8

CHANGE IN CONDITION

MELTING POINT/MELTING RANGE: UNDETERMINED

BOILING POINT/BOILING RANGE: UNDETERMINED

FLASH POINT: NOT DETERMINED.

SELF-IGNITING: UNDETERMINED

DANGER OF EXPLOSION: PRODUCTS ARE NOT EXPLOSIVE. HOWEVER, FLAMMABLE VAPOR BUILD-UP IS POSSIBLE. KEEP AREA WELL-VENTILATED.
DENSITY: NOT DETERMINED
SOLUBILITY IN/MISCIBILITY WITH WATER: FULLY MISCIBLE
SEE SECTION 10.

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY

CHEMICAL STABILITY

STABLE BETWEEN -10°C AND ROOM TEMPERATURE 40°C.

THERMAL DECOMPOSITION/CONDITIONS TO BE AVOIDED: EXPOSURE TO MOISTURE. HEAT

POSSIBILITY OF HAZARDOUS REACTIONS: NO DANGEROUS REACTIONS KNOWN

MATERIALS TO AVOID: STRONG BASES, STRONG OXIDIZING AGENTS, AMINES

HAZARDOUS DECOMPOSITION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS –CARBON OXIDES, HYDROGEN CHLORIDE GAS (PART# GL 39)

SECTION 11. TOXICOLOGICAL INFORMATION

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

INFORMATION ON TOXICOLOGICAL EFFECTS FOR PART# GL39

ACUTE TOXICITY

ORAL LD50

LD50 ORAL -RAT- 3,320 mg/kg

INHALATION LC50

NO DATA AVAILABLE

DERMAL LD50

NO DATA AVAILABLE

SKIN CORROSION/IRRITATION

NO DATA AVAILABLE

SERIOUS EYE DAMAGE/EYE IRRITATION

EYES -RABBIT- SEVERE EYE IRRITATION -5 SEC

RESPIRATORY OR SKIN SENSITIZATION

NO DATA AVAILABLE

GERM CELL MUTAGENICITY

NO DATA AVAILABLE

CARCINOGENICITY

THIS PRODUCT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP OR EPA CLASSIFICATION.

REPRODUCTIVE TOXICITY

NO DATA AVAILABLE

TERATOGENICITY

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE)

NO DATA AVAILABLE

ASPIRATION HAZARD

NO DATA AVAILABLE

POTENTIAL HEALTH EFFECTS

INHALATION	MAY BE HARMFUL IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT
INGESTION	MAY BE HARMFUL IF SWALLOWED
SKIN	MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS
EYES	CAUSES EYE BURNS. CAUSES SEVERE EYE BURNS.

SIGNS AND SYMPTOMS OF EXPOSURE

BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, SPASM, INFLAMMATION AND EDEMA OF LARYNX, INFLAMMATION AND EDEMA OF THE BRONCHI, PNEUMONITIS, PULMONARY EDEMA.

SECTION 12. ECOLOGICAL INFORMATION**INFORMATION FOR PART# GL39****TOXICITY**

TOXIC TO FISH AND AQUATIC LIFE WITH LONG LASTING EFFECTS

GENERAL NOTES:

DO NOT POUR UNDILUTED PRODUCT OR LARGE QUANTITIES INTO DRAINS OR ALLOW TO REACH GROUND WATER, WATER COURSE OR SEWAGE SYSTEM.

SECTION 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: DISPOSE OF AS UNUSED PRODUCT

RECOMMENDATION: DISPOSAL MUST BE MADE ACCORDING TO OFFICIAL REGULATIONS. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A

LICENSED DISPOSAL COMPANY. DISSOLVE OR MIX MATERIAL WITH COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
RECOMMENDED CLEANSING AGENT: WATER, IF NECESSARY WITH CLEANSING AGENTS.
HAND OVER TO HAZARDOUS WASTE DISPOSERS.
CONTAMINATED PACKAGING: DISPOSE OF AS UNUSED PRODUCT
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. TRANSPORT INFORMATION

FOR PART# GL39

DOT (US)

UN NUMBER: 1839 CLASS: 8 PACKING GROUP: II
MARINE POLLUTANT: NO
POISON INHALATION HAZARD: NO

IMDG

UN NUMBER: 1839 CLASS: 8 PACKING GROUP: II
EMS-NO: F-A, S-B
MARINE POLLUTANT: NO

IATA

UN NUMBER: 1839 CLASS: 8 PACKING GROUP: II

SECTION 15. REGULATORY INFORMATION

OSHA HAZARDS

TARGET ORGAN EFFECT (PART# GL39)
CORROSIVE, CARCINOGEN (PART# GL39)

THIS MATERIAL IS CONSIDERED HAZARDOUS BY OSHA STANDARD 29 CFR 1910.1200

EU REGULATORY INFORMATION

THIS MATERIAL IS CLASSIFIED AS DANGEROUS ACCORDING TO DIRECTIVE 67/548.EEC AND ITS AMENDMENTS

U.S. REGULATORY INFORMATION

**SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA)
SECTION 302/204 (40CFR355.30/40CFR355.40):**

NO COMPONENTS OF THIS KIT ARE LISTED

SECTION 313 (40CFR372.65):

NO COMPONENTS OF THIS KIT ARE LISTED

SARA 311/312 HAZARDS

ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD (PART# GL39)

MARKINGS ACCORDING TO EU GUIDELINES:**CODE LETTER AND HAZARD DESIGNATION OF PRODUCT:**

C: CORROSIVE (PART# GL39)

N: DANGEROUS TO ENVIRONMENT (PART# GL39)

CANADA REGULATORY INFORMATION

PART# GL39

CLASS E: CORROSIVE SOLID

STATE REGULATIONS

MA, NJ, PA (PART# GL39)

HAZARD SYMBOLS:

FOR PART# GL39

C: CORROSIVE

N: DANGEROUS TO ENVIRONMENT

DEFINITIONS:**RISK PHRASES:**

R35-CAUSES SEVERE BURNS

R50/53-VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE
LONG-TERM ADVERSE EFFECTS IN AQUATIC ENVIRONMENT

SAFETY PHRASES:

S24-AVOID CONTACT WITH SKIN

S25-AVOID CONTACT WITH EYES

S26-IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY
WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE

S36-WEAR PROTECTIVE CLOTHING

S37-WEAR PROTECTIVE GLOVES

S39-WEAR EYE/FACE PROTECTION

S45-IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK
MEDICAL ADVICE IMMEDIATELY.

S61-AVOID RELEASE INTO ENVIRONMENT

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.

COPYRIGHT 2011 CYTOSKELETON, INC.