

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

### Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

- 1.1 Product Code:** 579070  
**Product Name:** Retinol Binding Protein 4 (human) Competitive EIA Kit  
**Synonyms:** RBP4;
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
**Relevant identified uses:** For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
- Company Name:** Cayman Chemical Company  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108
- Web site address:** www.caymanchem.com
- Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
- Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300  
CHEMTREC Outside USA and Canada: +1 (703)527-3887

### Section 2. Hazards Identification

**2.1 Classification of the Substance or Mixture:**

**Toxic To Reproduction, Category 1B**

**2.2 Label Elements:**



**GHS Signal Word:** **Danger**

**GHS Hazard Phrases:**

H360: May damage fertility or the unborn child.

**GHS Precaution Phrases:**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

**GHS Response Phrases:**

P308+313: IF exposed or concerned: Get medical attention/advice.

**GHS Storage and Disposal Phrases:**

Please refer to Section 7 for Storage and Section 13 for Disposal information.

- 2.3 Adverse Human Health** Material may be irritating to the mucous membranes and upper respiratory tract.
- Effects and Symptoms:** May be harmful by inhalation, ingestion, or skin absorption.  
May cause eye, skin, or respiratory system irritation.  
May damage fertility or the unborn child.  
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

### Section 3. Composition/Information on Ingredients

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
NA NA	Wash Buffer Concentrate (10X)	~36.72 %	NA NA	No data available.
NA NA	Dilution Buffer (5X)	~36.72 %	NA NA	No data available.
NA NA	Detection Antibody	~ 8.813 %	NA NA	No data available.
NA NA	Anti-Rabbit IgG/HRP Conjugate (100X)	~ 0.11 %	NA NA	No data available.
NA NA	RBP4 (human) EIA Standard	< 0.004 %	NA NA	No data available.
NA NA	Substrate Solution I	~ 4.0 %	NA NA	No data available.
NA NA	Substrate Solution II	~ 4.407 %	NA NA	No data available.
NA NA	Stop Solution	~ 8.813 %	NA NA	No data available.
NA NA	Quality Control Sample	< 0.004 %	NA NA	No data available.
68-12-2 LQ2100000	N,N-Dimethylformamide	0.0 -0.5 %	200-679-5 616-001-00-X	Acute Tox.(D) 4: H312 Eye Damage 2: H319 Acute Tox.(I) 4: H332 Toxic Repro. 1B: H360

### Section 4. First Aid Measures

#### 4.1 Description of First Aid

##### Measures:

**In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**In Case of Skin Contact:** Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**In Case of Eye Contact:** Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.

**In Case of Ingestion:** Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

### Section 5. Fire Fighting Measures

- 5.1 Suitable Extinguishing Media:** Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.  
**Media:** Use water spray to cool fire-exposed containers.  
**Unsuitable Extinguishing Media:** A solid water stream may be inefficient.
- 5.2 Flammable Properties and Hazards:** No data available.
- Flash Pt:** No data.
- Explosive Limits:** LEL: No data. UEL: No data.
- Autoignition Pt:** No data.
- 5.3 Fire Fighting Instructions:** As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

### Section 6. Accidental Release Measures

- 6.1 Protective Precautions, Protective Equipment and Emergency Procedures:** Avoid raising and breathing dust, and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.
- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

#### 8.1 Exposure Parameters:

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
NA	Wash Buffer Concentrate (10X)	No data.	No data.	No data.
NA	Dilution Buffer (5X)	No data.	No data.	No data.
NA	Detection Antibody	No data.	No data.	No data.
NA	Anti-Rabbit IgG/HRP Conjugate (100X)	No data.	No data.	No data.
NA	RBP4 (human) EIA Standard	No data.	No data.	No data.
NA	Substrate Solution I	No data.	No data.	No data.
NA	Substrate Solution II	No data.	No data.	No data.
NA	Stop Solution	No data.	No data.	No data.
NA	Quality Control Sample	No data.	No data.	No data.
68-12-2	N,N-Dimethylformamide	TWA: 30 mg/m3 (10 ppm) STEL: 61 mg/m3 (20 ppm)	TWA: 30 mg/m3 (10 ppm)	No data.



# SAFETY DATA SHEET

## Retinol Binding Protein 4 (human) Competitive EIA Kit

Page: 4 of 7

Revision: 07/01/2015

Supersedes Revision: 09/15/2011

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
NA	Wash Buffer Concentrate (10X)	No data.	No data.	No data.
NA	Dilution Buffer (5X)	No data.	No data.	No data.
NA	Detection Antibody	No data.	No data.	No data.
NA	Anti-Rabbit IgG/HRP Conjugate (100X)	No data.	No data.	No data.
NA	RBP4 (human) EIA Standard	No data.	No data.	No data.
NA	Substrate Solution I	No data.	No data.	No data.
NA	Substrate Solution II	No data.	No data.	No data.
NA	Stop Solution	No data.	No data.	No data.
NA	Quality Control Sample	No data.	No data.	No data.
68-12-2	N,N-Dimethylformamide	PEL: 10 ppm	TLV: 10 ppm	No data.

### 8.2 Exposure Controls:

**8.2.1 Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

### 8.2.2 Personal protection equipment:

**Eye Protection:** Safety glasses

**Protective Gloves:** Compatible chemical-resistant gloves

**Other Protective Clothing:** Lab coat

**Respiratory Equipment** NIOSH approved respirator, as conditions warrant.

**(Specify Type):**

**Work/Hygienic/Maintenance Practices:** Do not take internally.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Wash thoroughly after handling.

No data available.

## Section 9. Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

**Physical States:** [ ] Gas [ X ] Liquid [ X ] Solid

**Appearance and Odor:** No data available.

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

**Flammability (solid, gas):** No data available.

**Explosive Limits:** LEL: No data. UEL: No data.

**Vapor Pressure (vs. Air or mm Hg):** No data.

**Hg):**

**Vapor Density (vs. Air = 1):** No data.

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.



# SAFETY DATA SHEET

## Retinol Binding Protein 4 (human) Competitive EIA Kit

Page: 5 of 7

Revision: 07/01/2015

Supersedes Revision: 09/15/2011

### 9.2 Other Information

**Percent Volatile:** No data.

## Section 10. Stability and Reactivity

- 10.1 Reactivity:** No data available.
- 10.2 Stability:** Unstable [ ] Stable [ X ]
- 10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.
- Polymerization:** Will occur [ ] Will not occur [ X ]
- 10.4 Conditions To Avoid:** No data available.
- 10.5 Incompatibility - Materials To Avoid:** No data available.
- 10.6 Hazardous Decomposition or Byproducts:** No data available.

## Section 11. Toxicological Information

- 11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.
- Chronic Toxicological Effects:** DMF - Toxicity Data: Oral LD50 (mouse): 2,900 mg/kg; Oral LD50 (rat): 2,000 mg/kg; Oral LD50 (rabbit): 5,000 mg/kg; Skin LD50 (rat): >3,200 mg/kg; Skin LD50 (rabbit): 4,720 mg/kg;
- DMF - Investigated as a mutagen, reproductive effector, and tumorigen.
- Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
- See actual entry in RTECS for complete information.
- DMF RTECS Number: LQ2100000
- Carcinogenicity/Other Information:** DMF - IARC: Group 3: Not classifiable as to its carcinogenicity to humans;

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	Wash Buffer Concentrate (10X)	n.a.	n.a.	n.a.	n.a.
NA	Dilution Buffer (5X)	n.a.	n.a.	n.a.	n.a.
NA	Detection Antibody	n.a.	n.a.	n.a.	n.a.
NA	Anti-Rabbit IgG/HRP Conjugate (100X)	n.a.	n.a.	n.a.	n.a.
NA	RBP4 (human) EIA Standard	n.a.	n.a.	n.a.	n.a.
NA	Substrate Solution I	n.a.	n.a.	n.a.	n.a.
NA	Substrate Solution II	n.a.	n.a.	n.a.	n.a.
NA	Stop Solution	n.a.	n.a.	n.a.	n.a.
NA	Quality Control Sample	n.a.	n.a.	n.a.	n.a.
68-12-2	N,N-Dimethylformamide	n.a.	3	A4	n.a.

## Section 12. Ecological Information

- 12.1 Toxicity:** Avoid release into the environment.
- Runoff from fire control or dilution water may cause pollution.
- 12.2 Persistence and Degradability:** No data available.
- 12.3 Bioaccumulative Potential:** No data available.
- 12.4 Mobility in Soil:** No data available.
- 12.5 Results of PBT and vPvB** No data available.

Multi-region format



# SAFETY DATA SHEET

## Retinol Binding Protein 4 (human) Competitive EIA Kit

Page: 6 of 7

Revision: 07/01/2015

Supersedes Revision: 09/15/2011

assessment:

12.6 Other adverse effects: No data available.

### Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

### Section 14. Transport Information

#### 14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class:

UN/NA Number:

#### 14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number:

Hazard Class:

#### 14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

### Section 15. Regulatory Information

#### EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
NA	Wash Buffer Concentrate (10X)	No	No	No
NA	Dilution Buffer (5X)	No	No	No
NA	Detection Antibody	No	No	No
NA	Anti-Rabbit IgG/HRP Conjugate (100X)	No	No	No
NA	RBP4 (human) EIA Standard	No	No	No
NA	Substrate Solution I	No	No	No
NA	Substrate Solution II	No	No	No
NA	Stop Solution	No	No	No
NA	Quality Control Sample	No	No	No
68-12-2	N,N-Dimethylformamide	No	Yes 100 LB	Yes

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
NA	Wash Buffer Concentrate (10X)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
NA	Dilution Buffer (5X)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
NA	Detection Antibody	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
NA	Anti-Rabbit IgG/HRP Conjugate (100X)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
NA	RBP4 (human) EIA Standard	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
NA	Substrate Solution I	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

Multi-region format



# SAFETY DATA SHEET

## Retinol Binding Protein 4 (human) Competitive EIA

Page: 7 of 7

### Kit

Revision: 07/01/2015

Supersedes Revision: 09/15/2011

NA	Substrate Solution II	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
NA	Stop Solution	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
NA	Quality Control Sample	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
68-12-2	N,N-Dimethylformamide	CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory, 8D TERM; CA PROP.65: No

#### Regulatory Information

This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC)

#### Statement:

No.1272/2008.

### Section 16. Other Information

#### Revision Date:

07/01/2015

#### Additional Information About

No data available.

#### This Product:

#### Company Policy or Disclaimer:

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.