SIGNALCHEM DIAGNOSTICS

Catalog #	Aliquot Size
CADV1-876-96	96 reactions

Guinea Pig Adenovirus (ADV) ELISA Kit

Catalog # CADV1-876

Lot # 1L2111-7

Product Description

Guinea Pig Adenovirus (ADV)ELISA kit is for the qualitative determination of ADV in Guinea Pig serum, plasma, culture media or any biological fluid.

Components

Component Name	Storage Conditions	96 reactions
Plate Cover	R.T.	2
Self-sealing Bag	R.T.	1
ELISA strip Microplate	2-8°C	1
Negative Control	2-8°C	0.5ml×1 bottle
Positive Control	2-8°C	0.5ml×1 bottle
HRP-Conjugate Reagent	2-8°C	6ml×1 bottle
Sample Diluent	2-8°C	6ml×1 bottle
Chromogen Solution A	2-8°C	6ml×1 bottle
Chromogen Solution B	2-8°C	6ml×1 bottle
Stop Solution	2-8°C	6ml×1 bottle
Wash solution (30X)	2-8°C	20ml×1bottle

Storage and Stability

Store all reagents at 2-8°C. Product stored under these conditions should be stable for 6 months.

Scientific Background

The microplate provided in this kit has been pre-coated with an antibody specific to ADV. Samples are added to the microplate wells and bind the specific antibody. Then a Horseradish Peroxidase (HRP)-conjugated antibody specific for ADV is added to each well and incubated forming an antibody-antigen-enzyme labeled antibody complex. Following a wash to remove any unbound reagent, TMB substrate solution is added to each well. Wells that contain ADV and HRP conjugated ADV antibody will appear blue in color and then turn yellow after the addition of the stop solution. The optical density (OD) is measured spectrophotometrically at a wavelength of 450 nm. The qualitative determination of ADV is determined by comparing with the CUTOFF value.

Sample Preparation

Notes:

- Sample extraction and ELISA assay should be performed as soon as possible after sample collection. Samples should be extracted according to the relevant literature. If ELISA assay cannot be performed immediately, samples can be stored at -20°C. Repeated freeze-thaw cycles should be avoided.
- These kits cannot be used for samples with NaN_3 which can inhibit the activity of HRP.

Serum Samples

Collect whole blood. Allow the blood to clot by leaving it undisturbed at room temperature. This usually takes 10-20 minutes. Remove the clot by centrifuging at 2,000-3,000 rpm for 20 minutes. If precipitates appear during storage, the sample should be centrifuged again.

Plasma Samples

Collect whole blood into tubes with anticoagulant (EDTA or citrate). After incubation at room temperature for 10-20 minutes, centrifuge tubes for 20 min at 2,000-3,000 rpm. Collect the supernatant carefully as plasma samples. If precipitates appear during storage, the sample should be centrifuged again.

Urine, Cerebrospinal fluid, and Pleuroperitoneal Samples

Collect urine in aseptic tubes. Centrifuge for 20 min at 2,000-3,000 rpm and collect the supernatant carefully. If precipitates appear during storage, the sample should be centrifuged again. The preparation procedure of cerebrospinal fluid and pleuroperitoneal fluid is the same as that of urine samples.

Cell Samples

To detect cell secretions, collect culture supernatant into aseptic tubes. Centrifuge for 20 min at 2,000-3,000 rpm and collect the supernatant carefully. To detect intracellular components, dilute the cells to $1X10^6$/ml with PBS (pH 7.2-7.4). Destroy the cells by repeated freezing and thawing to release intracellular components. Centrifuge for 20 min at 2,000-3,000 rpm and collect the supernatant carefully. If precipitates appear during storage, the sample should be centrifuged again.

Tissue samples
Cut, weigh, and freeze tissue samples in liquid nitrogen. Store at -80°C for future use. Thaw at 4°C prior to use. Homogenize samples after adding PBS (pH 7.4). Collect the supernatant carefully after centrifuging for 20 min at 2,000-3,000 rpm. Aliquot the supernatant for ELISA assay and future use.

Procedure

Notes:

- The kit should be equilibrated to room temperature before the assay. Remove any unneeded strips from the antibody-coated ELISA strip microplate, reseal them in self-sealing bag and keep at 4°C.
- Precipitates may appear in the concentrated wash solution. Please heat the solution to dissolve all the precipitates, this will not affect the results.
- To avoid cross-contamination, plate covers are for one-time use only.
- Keep Chromogen Solutions A and B away from light.
- All absorbance reading operations should be conducted strictly in accordance with the Microplate Reader manufacturer's instructions.
- All samples and waste products should be treated as infectious agents.
- Reagents from different lots should not be mixed.

Step 1: Number the microplate wells as appropriate for each sample, leave two wells as negative control, two wells as positive control, and one empty well as blank control. In the blank control well, sample and HRP-conjugate reagent will not be added, the rest of the steps will be the same.

Step 2: Add 50µl of negative and positive control to the negative and positive control wells respectively. In the sample wells, add 40µl of sample diluent and 10µl sample (dilution factor is 5). Samples should be loaded onto the bottom without touching the well wall. Mix well by gently shaking.

Step 3: Seal plate with plate cover and incubate for 30 min at 37°C.

Step 4: Dilute the 30X wash solution with distilled water to a final concentration of 1X. The entire bottle may be diluted and stored at 2-8°C. Otherwise, note that approximately 5ml of 1X wash solution will be needed for each well.

Step 5: Carefully remove plate cover, aspirate well contents, and refill with 450 – 500µl the wash solution. Discard the wash solution after resting for 30 seconds. Repeat this washing procedure a total of 5 times.

Step 6: Add 50µl HRP-Conjugate reagent to each well except the blank control well. Incubate as described in Step 3, then wash as described in Step 5.

Step 9: Add 50µl Chromogen Solution A and 50 µl Chromogen Solution B to each well, mix by gently shaking and incubate at 37℃ for 15 minutes. Avoid exposure to light during this step.

Step 10: Add 50µl stop solution to each well to terminate the reaction. The color in the well should change from blue to yellow.

Step 11: Read absorbance O.D. at 450nm using a Microplate Reader. The OD value of the blank control well should be set to zero. The absorbance should be read within 15 minutes of adding the stop solution.

Determine the result.
Test effectiveness:
average value of positive control ≥1.00
average value of negative control ≤0.10

Critical value (CUT OFF) calculation:
critical value = the average value of negative control + 0.15

Negative judgement: if the OD value< CUT OFF, the sample is Guinea Pig ADV negative.
Positive judgement: if the OD value ≥CUT OFF, the sample is Guinea Pig ADV positive.

SAFETY DATA SHEET

Article 1 - Product Identification

Product Name: Guinea Pig Adenovirus (ADV) ELISA Kit **Catalog # CADV1-876**

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.

Supplier of Datasheet:	SignalChem Diagnostics Inc.
Street Address:	*190-13160 Vanier Place*
City, Prov. Postal Code:	*Richmond, BC, V6V 2J2*
Country:	*Canada*
Emergency Phone:	1-888-606-3424 (Toll free) 1-778-326-0223 (local)

Article 2 - Hazard Identification

- **WHMIS Classification:** Not WHMIS controlled.
- **GHS classification:** Not GHS classified.
- **Hazard Pictograms:** No labeling applicable.
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:** Wear protective gloves/protective clothing/eye protection/ face protection. Avoid breathing dust. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- **Other hazards:** none known.

Article 3 – Composition/Information on Ingredients

Component: Negative Control
Chemical Characterization: Mixtures.
Description: No hazardous substances in concentrations to be declared.

Component: Positive Control
Chemical Characterization: Mixtures.
Description: No hazardous substances in concentrations to be declared.

Component: HRP-Conjugate Reagent
Chemical Characterization: Mixtures.
Description: No hazardous substances in concentrations to be declared.

Component: Sample Diluent
Chemical Characterization: Mixtures.
Description: This product consists of the substances listed below.

Common name	Chemical name	CAS-No.	Concentration
BSA	Bovine Serum Albumin	9048-46-8	1%
Sodium Chloride	Sodium Chloride	7647-14-5	<1%
Sodium Phosphate, Dibasic	Sodium Phosphate, Dibasic	7558-79-4	<0.5%
Potassium Phosphate, Monobasic	Potassium Phosphate, Monobasic	7778-77-0	<0.1%
Potassium Chloride	Potassium Chloride	7447-40-7	<0.1%
Tween-20	Polyoxyethylene (20) sorbitan monolaurate	9005-64-5	0.05%

Component: Chromogen Solution A
Chemical Characterization: Mixtures.
Description: This product consists of the substances listed below.

Common name	Chemical name	CAS-No.	Concentration
Hydrogen peroxide	H_2O_2	7722-84-1	0.16%

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Component: Chromogen Solution B
Chemical Characterization: Mixtures.
Description: This product consists of the substances listed below.

Common name	Chemical name	CAS-No.	Concentration
TMB	3,3',5,5'-Tetramethylbenzidine	54827-17-7	0.016%

Component: Stop Solution
Chemical Characterization: Mixtures.
Description: This product consists of the substances listed below.

Common name	Chemical name	CAS-No.	Concentration
Sulfuric Acid	H_2SO_4	7664-93-9	<1%

Component: Wash solution (30X)
No hazardous substances in concentrations to be declared.

Article 4 – First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** In case of irritation by inhaling this product, move affected person to fresh air and await recovery. If irritation persists, seek immediate medical attention. If casualty cannot breathe, give artificial respiration, and seek immediate medical attention.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Consult a physician.
- **After swallowing:** Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment, and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Absorb on sand or vermiculite and place in closed containers for disposal.

Article 7 - Handling and Storage

- **Precautions for safe handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Store in a dry and well-ventilated place. Keep container upright and tightly closed.

Article 8 - Exposure Controls/Personal Protection

- **Components with limit monitoring values at workplace:** N/A
- **Appropriate engineering controls:**
  Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**
  Respiratory protection:
  Use appropriate respirator if there is inadequate ventilation by following the government standards.
  Hand protection:
  Wear gloves and use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
  Eye/face protection:
  Safety goggles with side-shields approved under appropriate government standards.
  Skin/body protection:
  Use appropriate clothing, footwear and any additional protection measures to protect from splashing or contamination.

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Article 9 – Physical and Chemical Properties

Chromogen Solution A, Chromogen Solution B, Sample Diluent:

Appearance: Liquid.	**Danger of explosion:** Product does not present an explosion hazard.
Odour/Odour Threshold: Not determined.	**Explosion limits:** Not determined.
pH: Not determined	**Decomposition temperature:** Not available.
Melting point/freezing point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Boiling point/Boiling range: Not determined	**Density:** Not determined.
Flash point: Not determined.	**Relative density:** Not determined.
Flammability (solid, gaseous): Not determined.	**Vapor density:** Not determined.
Ignition temperature: Not determined.	**Evaporation rate:** Not determined.
Auto-igniting: Product is not self-igniting.	**Solubility in / Miscibility with Water:** Fully miscible.

30X Wash Solution, HRP-Conjugate Reagent, Stop Solution:

Appearance: Clear liquid.	**Danger of explosion:** Product does not present an explosion hazard.
Odour/Odour Threshold: Not determined.	**Explosion limits:** Not determined.
pH: Not determined	**Decomposition temperature:** Not available.
Melting point/freezing point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Boiling point/Boiling range: Not determined	**Density:** Not determined.
Flash point: Not determined.	**Relative density:** Not determined.
Flammability (solid, gaseous): Not determined.	**Vapor density:** Not determined.
Ignition temperature: Not determined.	**Evaporation rate:** Not determined.
Auto-igniting: Product is not self-igniting.	**Solubility in / Miscibility with Water:** Fully miscible.

Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Heat and moisture.
- **Incompatible materials:** Not determined.
- **Hazardous decomposition products:** Not determined.

Article 11 - Toxicological Information

- **Acute toxicity:** Not available.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** Not available.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:**
  Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
  Ingestion: May be harmful if swallowed.
  Skin: May be harmful if absorbed through skin. May cause skin irritation.
  Eyes: May cause eye irritation.
- **Signs and Symptoms of Exposure:**
  Prolonged or repeated exposure can cause: Nausea, Dizziness.
- **Synergistic effects:** Not available.

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Article 12 - Ecological Information

- **Eco-toxicity:** No data available.
- **Biodegradability:** Not applicable.
- **Bio-accumulative potential:** Not applicable.
- **Mobility in soil:** Not applicable.
- **PBT and vPvB assessment:** Not applicable.
- **Other adverse effects:** Not applicable.

Article 13 - Disposal Considerations

- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

Article 15 – Regulatory Information

- **WHMIS Classification:** Non-hazardous.
- **GHS label elements:** Not applicable.
- **Signal word:** Not applicable.
- **Hazard statements:** Not applicable.

Article 16 - Other 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. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.