Okadaic Acid Lateral Flow Kit (Field Use)

Catalog Number:AU2072

For Research Use Only. Not for use in Diagnostic Procedures.

1. Intended Use

For the screening of Okadaic Acid in fresh and seawater samples at 0.5 ppb. Samples requiring regulatory action should be confirmed by ELISA, HPLC, or other conventional methods.

2. Introduction

Attogene's Okadaic Lateral Flow Kit can be used to detect Okadaic Acid in liquid samples. This kit is compatible with fresh and seawater samples.

Format: Rapid-Water - Run Time: 20 Minutes

Okadaic Acid (OA) is a one of the diarrhetic shellfish poisons (DSP) produced by dinoflagellate genera Dinophysis and Prorocentrum. There are several chemically different toxins associated with DSP. It inhibits key protein phosphatases (PP1 and PP2A), causing intestinal cells to leak fluids and leading to severe gastrointestinal distress. Filter-feeding shellfish—such as mussels, clams, and oysters—concentrate the toxin by ingesting the algae, posing a risk to human seafood consumers.

They are lipophilic and polyether compounds and can be divided into three main groups:

1. Acidic toxins
2. Neutral toxins
3. Other toxins 2 Contamination of shellfish with OA has been associated with harmful algae blooms throughout the world.

3. Kit Contents

Component Name	Volume	Storage
Okadaic Acid Cassette	10 each	RT
1mL Syringe	5 each	RT
Sample Filter	5 each	RT
Sample Dilution Buffer	5 each	RT
Negative Control	5 each	RT
Water Sample Bottle	5 each	RT

4. Storage and Stability

- The kit should be stored at 2°C - 30°C until ready to use.
- The test must remain in the sealed pouch until use.

5. Required Materials Not Supplied

- Timer - For timing use
- Marker – for labeling

6. Precautions

- The Okadaic Acid Lateral Flow Kit provide only preliminary qualitative test results. Use another, more quantitative, analytical method such as ELISA or instrumental analysis to obtain a confirmed quantitative analytical result.
- Prior to use, ensure that the product has not expired by verifying that the date of use is prior to the expiration date on the label.
- The test cassettes are individually packaged in a foil pouch with a desiccant & disposable pipette.
- Avoid cross-contamination of samples by using a new bottle for each sample.
- Use only Okadaic Acid Lateral Flow Kit reagents from one kit lot, as they have been adjusted in combination.
- It is good laboratory practice to use positive and negative controls to ensure proper test performance. Samples which do not contain Okadaic Acid (negative controls) as well as samples containing known quantities of Okadaic Acid (positive controls) should be analyzed with each lot of test strips to provide a reference for line intensity to be expected.

7. Water Collection, Storage and Cell Lysis

- Using gloves, collect water samples into the 125 ml Water Sample Bottle and store refrigerated for up to 5 days (label the water collection bottle). If samples must be held for greater than 5 days, samples should be stored frozen.
- If cell lysis is required, we recommend performing either 2-3 freeze thaw cycles or sonicating the sample for 3 x 10-60 seconds prior to filtering.
- Allow the test cassettes, running buffer, and samples to reach room temperature before testing.

8. Procedure

- Using gloves, remove each lateral flow cassette from the foil pouch. A marker may be used to write on the plastic cassette if desired.

Perform A and B for each sample evaluation starting with the negative control first.

A. Negative Control (perform first):

- Use the syringe (DO NOT USE FILTER) to transfer 200ul (denoted as 0.2 on the side of the syringe) from the Negative Control tube directly into the sample port of the cassette.
- Set time and review results after 15-20 minutes.

B. Sample:

- Next, using the emptied syringe, take 1mL of sample from the 125mL water sample bottle.
- Add the debris filter onto the end of the syringe.
- Add the full contents of the 1mL syringe into the sample dilution buffer tube.
- Remove the debris filter from the syringe.
- Mix the sample gently up and down 3 times using the syringe.
- Use the syringe to transfer 200ul (denoted as 0.2 on the side of the syringe) from the tube directly into the sample port of the cassette.
- Set time and review results after 15-20 minutes.

9. Interpretation of Results

For samples prepared as described above, screening concentrations are determined by comparison of the intensity of the test line to the intensity of the control line on parallel test strips. Although control line intensity may vary, a visible control line must be present for results to be considered valid. Test strips with a test line which is darker than or of equal intensity to the test line of the control indicates a result which is below the limit of detection of the test. Test strips with a test line which is lighter than the control strip indicates a result which is above 0.5 ppb. Results should be determined within 5 minutes after completion of the strip test procedure (20-25 minutes). Determination made using strips which have dried for more or less than the required time may be inaccurate, as line intensities may vary with drying time.

To obtain semi-quantitative results in the range of 0 – 10 ppb, solutions of known Okadaic Acid concentration (control solutions) must be tested concurrently with samples. Sample test line intensities can then be compared with control solution test line intensities, yielding approximate sample concentrations. Do not use strips run previously to determine semi-quantitative sample concentrations, as test line intensities may vary once strips are completely dry.

10. Additional Analysis

If necessary, positive samples can be confirmed by ELISA, HPLC, or other conventional methods. A lateral flow reader may also be employed to generate numerical readings from the visual result. Contact us if you have any questions.

Who we are

Attogene is a biotechnology company located in Austin, Texas. Our focus is to enhance health and wellness by offering and developing customer focused Life Science Products domestically and internationally.

Our mission is to:

- Enhance detection technologies
- Enable rapid responses
- Enable impactful research discoveries

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