Immunochromatography

© EXPLANATION OF THE TEST

The Asan Easy Test® HCV is a chromatographic immunoassay for the rapid qualitative determination of HCV antibodies in human serum or plasma. For diagnosis of HCV infection, HCV recombinant antigens (core, NS3, NS4, NS5) were used as a capture materials of the immunochromatographic test. The Asan Easy Test® HCV contains the membrane, which is pre-coated with properly mixed recombinant HCV antigens (core, NS3, NS4, NS5) on the test band region. During the test, the sample is allowed to react with the colloidal gold-rHCV conjugate, which has been pre-dried on the conjugate pad between membrane and sample pad. The mixture then moves upward on the membrane by capillary action. For positive result, a visible line with high sensitivity and specificity as forming antibody-rHCV-gold complex appears in the test band region of the membrane. Regardless of the presence of HCV antibodies, the mixture continuously moves across the membrane to pre-dried control line. Therefore, the control line will always appear and verify proper performance of the test. The Asan Easy Test® HCV minimizes the possibility for the false positive and places high confidence in the test result using high quality of HCV recombinant antigens.

MATERIALS PROVIDED

The Asan Easy Test® HCV contains following items to perform the assay.

- 1. Test device in aluminium pouch with a desiccant.
- 2. Assay solution.
- 3. Instruction manual for use.

PRECAUTIONS

- 1. For in vitro diagnostic use only.
- 2. The test kit should remain in the sealed pouch until ready for use.
- 3. The test kit is sensitive to humidity and to heat.
- 4. Do not smoke, eat or drink in areas where specimens or kit component are handled.
- All specimens and reagents should be considered potentially hazardous and handled in the same manner as an infection agent.
- 6. Wear protective gloves while handling samples and wash hands thoroughly after the assay is complete.
- 7. Avoid any contact with the eyes, broken skin or mucous membranes.
- 8. The test device and all materials should be discarded in a proper biohazard container after testing.

© SPECIMEN COLLECTION AND STORAGE

- 1. The test should be performed using human serum or plasma.
- 3. Specimens containing precipitate may yield inconsistent test results. Such specimens must be clarified prior to assay.

© TEST PROCEDURE

- All materials should be equilibrated to room temperature before performing test.
- Remove the device from its protective pouch.
- 3. Add 10 $\mu\ell$ of serum or plasma into the sample well(S).
- 4. Dispense 3~4 drops(about 100 $\mu \ell$) of assay solution into the sample well(S).
- 5. Interpret test results within 20 minutes. Do not interpret after 20 minutes.

(CAUTION: The above interpretation time is based on reading the test results at room temperature of 15~30 $^\circ$ C. If your room temperature is significantly lower than 15 $^\circ$ C, then the interpretation time should be properly increased.)

INTERPRETATION OF THE TEST

- 1. A color band will appear in the upper section ("C" zone) of the window to show that the test is working properly. This band is a control band.
- 2. The down section ("T" zone) of the window indicates the test results, test band. If another color band appears in the down section of the window, this band is a test band.

A. NEGATIVE RESULTS:

The presence of only one purple color band("C" band) within the result window indicates a negative result.



B. POSITIVE RESULTS:

The presence of two color bands ("T" band and "C" band) within the result window regardless of which band appears first indicates a positive result.



C. INVALID RESULTS:

If no band is visible within the window after performing the test, the result is considered invalid . Some causes of invalid results are: not following the directions correctly or the test may have deteriorated beyond the expiration date. It is recommended that the specimen be re-tested using a new test kit.



© LIMITATIONS OF THE TEST

Other clinically available tests are required if questionable results are obtained. As all diagnostic tests, a definitive clinical diagnosis should not be based on the results of a single test, but be made by the physician after all clinical and laboratory findings have been evaluated.

STORAGE & EXPIRATION

- 1. Asan Easy Test HCV° should be stored at 1 \sim 30 °C (35.6 \sim 86 °F) $_{1^{\circ}\text{C}}$
- 2. Expiration date of this kit is 24 months after its manufacture date.

© PERFORMANCE CHARACTERISTICS

Multi-site studies were performed using a total of 200 specimens. Each specimen was tested with Asan Easy Test® HCV and Commercial HCV. The results are summarized in the following tables.

n= 200		RIA method		Total
		Positive	Negative	IOlai
Asan Easy Test® HCV	Positive	100	1	101
	Negative	0	99	99
Total		100	100	200

- * Relative Sensitivity: 100%, Relative Specificity: 99%
- * Detection limit : 2.0 s/CO

® REFERENCE

- 1. Choo QL, Kuo G, Weiner AJ, et al, Isolation of a cDNA clone derived from a blood-borne non-A, non-B hepatitis. Science, 244:359-362, 1989.
- 2. Alter HJ, Purcell RH, Shih JW, et al, Detection of Antibody to hepatitis C virus in prospetively followed transfusion recipients with acute and chronic non-A, non-B hepatitis. N. Engl. J. Med. 321: 1494-1500, 1989.
- 3. Kuo G, Choo QL, Alter HJ, et al, An assay for circulating antibodies to major etiologic virus of human non-A, non-B hepatitis. Science, 244:362-364, 1989.



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