K972145

Immuno concepts

FEB 24 1998

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* 510(k) SUMMARY *
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Date Prepared: June 2, 1997
Contact Person: Eric S. Hoy, Ph.D.
Name of Device:

- Trade Name - HEp-2000® Fluorescent ANA-Ro Test System
- Common Name - HEp-2000® Fluorescent ANA-Ro Test System
- Classification Name - Antinuclear Antibody (21 CFR 866.5100)

Legally marketed device with which this device has been shown to be equivalent:

RELISA® SS-A/SS-B Antibody Test System, K955603

Description:

This is an indirect fluorescent antibody test for the semi-quantitative detection of antinuclear antibody in human serum. The transfected HEp-2 cell line allows for the identification of anti-SS-A/Ro antibodies because of the unique staining pattern that these antibodies show on this cell line.

Intended Use:

This test system is for in vitro diagnostic use for the detection of antinuclear antibodies in human serum, with specific identification of autoantibodies to the SS-A/Ro antigen. This test system is to be used as an aid in the detection of antibodies associated with systemic rheumatic disease. The results from this assay can be used as an aid in the diagnosis of autoimmune diseases.

Summary of Technological Characteristics Compared to the Predicate Device:

This device is a fluorescent antibody test for the detection of antinuclear antibodies. This 510(k) submission is an extension of K944096. In this new submission we have shown that the transfected HEp-2000® cell line produces a distinctive pattern that is confirmatory for the presence of antibodies to the SS-A/Ro autoantigen. We have compared the present device to an ELISA assay which is confirmatory for antibodies to the SS-A/Ro autoantigen (K955603).

Description of Laboratory Data That Indicate Substantial Equivalence:

NORMAL SAMPLES

Sera from 500 healthy blood donors, 242 females and 258 males, none of whom had any known history of rheumatic diseases, were tested in parallel using commercially available, non-transfected HEp-2 cells and the HEp-2000® Fluorescent ANA-Ro Test System. In this population, 36 samples (7.2%) showed positive antinuclear antibody tests at a 1:40 dilution of serum. Patterns of staining were identical on the two substrates for 34 of the 36 positive samples. The two samples that showed differences were both from female patients, and both were confirmed to contain anti-SS-A/Ro antibodies. One of

these samples showed a weak fine speckled reaction on the non-transfected HEp-2 cells and the typical "SS-A/Ro" staining on the HEp-2000® Fluorescent ANA-Ro Test System. The other sample was negative on the non-transfected HEp-2 cells, but showed typical "SS-A/Ro" staining on the HEp-2000® Fluorescent ANA-Ro Test System. The SS-A/Ro specificity of these two samples was confirmed by ELISA testing and by Western immunoblotting.

SERA FROM PATIENTS WITH ONLY Ro/SS-A ANTIBODIES

Sera from 46 patients with SLE or Sjögren's Syndrome were tested using commercially available, non-transfected HEp-2 cells and the HEp-2000® Fluorescent ANA-Ro Test System. All of these sera were confirmed to contain antibodies to the SS-A/Ro autoantigen by ELISA testing and by Western immunoblotting. No other autoantibodies were detected in any of these samples. Thirty six of these samples (78%) were positive (speckled pattern) with the non-transfected HEp-2 cells, and all 46 (100%) were positive (distinctive Ro/SS-A staining pattern) with the HEp-2000® Fluorescent ANA-Ro Test System.

SERA FROM PATIENTS WITH AUTOANTIBODIES OTHER THAN SS-A/Ro

Serum samples from 230 patients with a variety of rheumatic and non-rheumatic diseases were tested in parallel using commercially available, non-transfected HEp-2 cells and the HEp-2000® Fluorescent ANA-Ro Test System. A single staining pattern was seen with 120 samples, and mixed patterns were seen with 110 samples. Among the total population of 230 samples, 333 staining patterns were identical on both substrates. Twenty nine samples showed the distinctive "SS-A/Ro" staining pattern on the HEp-2000® Test System. Twenty three of these samples showed speckled patterns on the non-transfected HEp-2 cells. The six discrepant samples (positive on HEp-2000®, but negative on non-transfected HEp-2 cells) all had SS-A/Ro antibodies, as demonstrated by the distinctive "SS-A/Ro" staining pattern, ELISA tests, and Western blot confirmation.

TITER COMPARISONS

Because of the overexpression of the SS-A/Ro autoantigen in the HEp-2000® cells, samples that contain anti-Ro/SS-A antibodies show higher titer values on these cells than the values obtained on non-transfected HEp-2 cells. Since none of the other autoantigens in the HEp-2000® cells are affected by the transfection process, sera with other autoantibody specificities do not show significant titer differences between the transfected HEp-2000® cell line and non-transfected HEp-2 cells.

TITER REPRODUCIBILITY

Ten samples, chosen from CDC controls and other well characterized in-house sera, were run on three different lot numbers of HEp-2000® slides, on three different occasions. In no case did a negative sample show positive results. All titer values were within one two-fold dilution of the established mean titer value for all samples tested.

CONFIRMATION OF SS-A/Ro ANTIBODIES

In a large rheumatology reference laboratory, serum samples from 349 patients with known positive ANA tests were assayed using the HEp-2000® Fluorescent Test System. In this selected population, 239 samples showed the distinctive SS-A/Ro staining pattern. Positive ELISA tests for SS-A/Ro antibodies were obtained in 238 (99.6%) of these samples. An additional 79 samples showed

strong speckled and/or homogeneous patterns, but gave positive ELISA tests for SS-A/Ro antibodies.. Thus, if the distinctive SS-A/Ro pattern is seen, it is confirmatory for the presence of SS-A/Ro antibodies, but the absence of the pattern does not rule out the possible presence of SS-A/Ro antibodies.

In the studies outlined above, we have examined a total of 429 sera that contain SS-A/Ro antibodies as confirmed by ELISA testing and/or Western Immunoblots, and which showed the distinctive SS-A/Ro staining pattern on the transfected HEp-2000® cell line. We have also seen samples which contain SS-A/Ro antibodies, but do not display the distinctive SS-A/Ro staining pattern, because high levels of other autoantibodies (usually anti-DNA antibodies or anti-Sm/RNP antibodies) mask the SS-A/Ro pattern. Thus, if the distinctive SS-A/Ro pattern is seen, it is confirmatory for the presence of SS-A/Ro antibodies, but the absence of the pattern does not rule out the possible presence of SS-A/Ro antibodies.

In accordance with 21 CFR 807.92(b)(3), we conclude from these data that the present device is substantially equivalent to the predicate device.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
2098 Gaither Road
Rockville MD 20850

Eric S. Hoy, Ph.D.
Chief, Scientific Officer
Immuno Concepts, Inc.
9779 "D" Business Park Drive
Sacramento, California 95827

FEB 24 1998

Re: K972145/S2
Trade Name: Hep-2000® Fluorescent ANA-Ro Test System
Regulatory Class: II
Product Code: DHN
Dated: February 4, 1998
Received: February 6, 1998

Dear Dr. Hoy:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. A substantially equivalent determination assumes compliance with the current Good Manufacturing Practice requirement, as set forth in the Quality System Regulation (QS) for Medical Devices: General regulation (21 CFR Part 820) and that, through periodic (QS) inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal Laws or Regulations.

Under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88), this device may require a CLIA complexity categorization. To determine if it does, you should contact the Centers for Disease Control and Prevention (CDC) at (770)488-7655.

This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4588. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll free number (800) 638-2041 or at (301) 443-6597 or at its internet address "http://www.fda.gov/cdrh/dsmamain.html"

Sincerely yours,

Steven Gutman

Steven I. Gutman, M.D., M.B.A.
Director
Division of Clinical
Laboratory Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

510(k) Number (if known):_____

Device Name: HEp-2000 Fluorescent ANA-Ro Test System

Indications For Use:

This is an indirect fluorescent antibody test for the semi-quantitative detection of antinuclear antibodies in human serum, with specific identification of autoantibodies to the SS-A/Ro antigen. This test system is to be used as an aid in the detection of antibodies associated with system rheumatic disease.

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

Peter E Mahun

(Division Sign-Off)
Division of Clinical Laboratory Devices
510(k) Number K972145

Prescription Use ✓
(Per 21 CFR 801.109)

OR

Over-The-Counter Use___

(Optional Format 1-2-96)