

*K033915*

JAN 16 2004

**510(k) SUMMARY**

**Applicant:** Quest International, Inc.  
1938 N.E. 148th Terrace  
North Miami, FL. 33181

**Registration No.** 1061839

**Contact Person:** Robert A. Cort, V.P. , Quality Assurance

**Telephone:** (305) 948-8788

**Telefax:** (305) 948-4876

**Manufacturing Site:** Same as above

**Device:** SeraQuest<sup>®</sup> EB VCA IgG

**Device Name:** Epstein-Barr virus serological reagents (21CFR § 866.3235)

**Device Classification:** Class I (general controls)

**Description**

The SeraQuest EB VCA IgG test is a solid-phase enzyme immunoassay (EIA), which is performed in microwells, at room temperature, in three thirty minute incubations. It has been developed to detect IgG antibodies which are directed against Epstein-Barr virus capsid antigen, in human serum.

The Calibrators in the SeraQuest EB VCA IgG test set have been assigned Index values based on an in-house standard. Test results are reported as Index values.

**Principle**

Diluted samples are incubated in wells coated with Epstein-Barr virus capsid antigen. Antibodies directed against Epstein-Barr virus capsid antigen (if present) are immobilized in the wells. Residual sample is eliminated by washing and draining, and conjugate (enzyme-labeled antibodies to human IgG) is added and incubated. If IgG antibodies to Epstein-Barr virus capsid antigen are present, the conjugate will be immobilized in the wells. Residual conjugate is eliminated by washing and draining, and the enzyme substrate is added and incubated. In the presence of the enzyme, the substrate is converted to a yellow end-product which is read photometrically at 405 nm.

**Intended Use**

**Intended Use:** The EB VCA IgG test is intended for the qualitative and semi-quantitative detection of human IgG antibodies to Epstein-Barr viral capsid antigen, in human serum by enzyme immunoassay, as an aid in differentiating active or recent Epstein-Barr virus infection from past infection. For manual use, or for use with the HyPrep System Plus. For In Vitro Diagnostic Use Only.

**Predicate Device**

The SeraQuest EB VCA IgG test is substantially equivalent in intended use and performance, to the Zeus EBV VCA IgG Test System, Zeus Scientific, Inc. Raritan, New Jersey. 08869.

**Summary of technological characteristics**

<u>Characteristic</u>	<u>SeraQuest EB VCA IgG</u>	<u>Zeus ' EBV-VCA IgG ELISA</u>
Description:	Enzyme Immunoassay	Enzyme Immunoassay
Intended Use:	The detection of IgG antibodies against Epstein-Barr virus capsid antigen in human serum.	The detection of IgG antibodies against Epstein-Barr virus capsid antigen in human serum.
Solid Phase:	Plastic Microwell	Plastic Microwell
Antigen :	Inactivated EB VCA virus	Inactivated EB VCA virus
Number of Incubation Periods:	Three	Three
Sample Dilution:	1:50	1:21
Sample Incubation Duration:	30 minutes	25 minutes
Incubation Temperature:	Room temperature	Room temperature
Ezyme-labeled Conjugate:		
Antibody	Goat anti-human IgG	Goat anti-human IgG
Enzyme	Alkaline phosphatase	Horseradish Peroxidase
Conjugate Volume:	100 µl	100 µl
Conjugate Incubation Duration:	30 minutes	25 minutes

Substrate:	p-Nitrophenyl phosphate	TMB
Substrate Volume:	100 µl	100 µl
Substrate Incubation Duration:	30 minutes	10 minutes
Stop Reagent:	0.5 M Trisodium Phosphate	1M H2SO4, 0.7 M HCL
Stop Reagent Volume:	100 µl	50 µl
Readout:	Spectrophotometric 405 nm	Spectrophotometric 450 nm

**Summary of Clinical Testing**

Of the 113 specimens tested, 61 were positive, and 36 were negative in both the SeraQuest and Zeus' VCA IgG tests. Of the 16 remaining specimens, 13 specimens which were positive by the Zeus' test, eight were negative and five equivocal by the SeraQuest test. One specimen which was equivocal by the Zeus' test, was negative by the SeraQuest test. Two specimens which were negative by the Zeus' test, were positive by the SeraQuest test. Excluding the equivocal results, the performance characteristics of the SeraQuest VCA IgG test (modified device) relative to Zeus' VCA IgG test were as follows. Please see Table 1 below.

**TABLE 1.  
 RESULTS OF SeraQuest VCA IgG ASSAYS (MODIFIED DEVICE) AND ZEUS VCA IgG ASSAYS ON 113 SERUM SAMPLES.**

Zeus EBV-VCA IgG	SeraQuest VCA IgG			Total
	Positive	Negative	Equivocal	
Positive	61	8	5	74
Negative	2	36	-	38
Equivocal	-	1	-	1
Total	63	45	5	113

Overall agreement [ (TP + TN) / (TP + TN + FP + FN ) ] = 90.7 % \*  
 95 % CI = 85.1-96.2 % \*\*

\* Excluding equivocal results  
 \*\* Calculated by the normal method.

Reference: Gardner, M.J. and Altman, D.G., Confidence Intervals Rather Than Hypothesis Testing Brit. Med. J., 292: 746-750, 198



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
2098 Gaither Road  
Rockville MD 20850

JAN 16 2004

Mr. Robert A. Cort  
V. P., Quality Assurance  
Quest International, Inc.  
1938 N.E. 148<sup>th</sup> Terrace  
North Miami, FL 33181

Re: k033915  
Trade/Device Name: SeraQuest EB VCA IgG  
Regulation Number: 21 CFR 866.3235  
Regulation Name: Epstein-Barr virus serological reagents  
Regulatory Class: Class I  
Product Code: LSE  
Dated: December 15, 2003  
Received: December 18, 2003

Dear Mr. Cort:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate 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) that do not require approval of a premarket approval application (PMA). 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 (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the Federal Register.

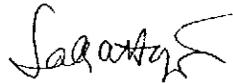
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820).

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This letter will allow you to begin marketing your device as described in your Section 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 information about the application of labeling requirements to your device, or questions on the promotion and advertising of your device, please contact the Office of *In Vitro* Diagnostic Device Evaluation and Safety at (301) 594-3084. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/dsma/dsmamain.html>.

Sincerely yours,



Sally A. Hojvat, M.Sc., Ph.D.  
Director  
Division of Microbiology Devices  
Office of In Vitro Diagnostic Device  
Evaluation and Safety  
Center for Devices and  
Radiological Health

Enclosure

### Indications for Use

510(k) Number                       K033915

Device Name SeraQuest EB VCA IgG

Indications for Use:

1. For In Vitro Diagnostic Use
2. For the qualitative and semi-quantitative detection of human IgG antibodies to Epstein-Barr (EB) viral capsid antigen (VCA) in human serum by enzyme immunoassay.
3. For use as an aid in differentiating active or recent infection, from past infection.

Prescription Use                        
(Part 21 CFR Subpart D)

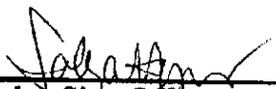
OR

Over-The-Counter-Use                       
(21 CFR 807 Subpart C)

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

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Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

  
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Division Sign-Off

**Office of In Vitro Diagnostic Device  
Evaluation and Safety**

510(k)                       K033915