JUL 22 1998

K981750

Summary of Safety and Effectiveness Information
GBM, ANCA Screening ELISA Test Kit

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Telephone: 46-46-182840
Date of preparation: May 1, 1998

II. Description of Device: The **Wielisa Anti-GBM, ANCA Screening Test Kit** is an enzyme-linked immunosorbent assay (ELISA) for the qualitative detection of antibodies to glomerular basement membrane (GBM), Proteinase-3 (PR-3) and Myeloperoxidase (MPO) in human sera. The assay is used to detect antibodies in a single serum specimen. The results of the assay are to be used as an aid to the diagnosis of reno-pulmonary syndromes and rapidly progressive glomerulonephritis, especially Goodpasture syndrome (GP), Wegener's granulomatosis (WG) and microcopic polyangiitis (MP). The assay is intended for use in patients with signs and symptoms consistent with GP, WG, and MP. It is not intended for screening a healthy population. A positive result should always be confirmed by a semi-quantitative assay.

The wells of the microtiter strips are coated with purified proteinase 3 (Human Neutrophil source), MPO (Human Neutrophil source) and GBM (Bovine source) antigen. During the first incubation, specific antibodies in diluted serum, will bind to the antigen coating.

The wells are then washed to remove unbound antibodies and other components. A conjugate of alkaline phosphatase-labeled (Goat) antibodies to human IgG binds to the antibodies in the wells in this second incubation.

After a further washing step, detection of specific antibodies is obtained by incubation with substrate solution. The amount of bound antibodies correlates to the color intensity and is measured in terms of absorbance (optical density (OD)). The absorbance is then calculated and the results are given as a ratio to the negative control.

III. Predicate Device

The GBM, ANCA Screening test is substantially equivalent to the Wielisa PR-3 ANCA ELISA Kit , the Wielisa MPO ANCA ELISA Kit and the Wielisa anti-GBM ELISA Kit. Equivalence is demonstrated by the following comparative results:

Table 1. Clinical sensitivity and specificity. A total of 326 frozen retrospective sera with clinical characterisation were assayed. The following table summarises the results

Control and Disease groups	Total	Negative < 3			Equivocal 3-4			Positive >4		
		GBM	PR3	MPO	GBM	PR3	MPO	GBM	PR3	MPO
Blood donors: (NS)	131	128	131	127	3	0	4	0	0	0
WG:	42	-	3	37	-	0	1	-	39	4
MP:	43	-	20	23	-	2	0	-	21	20
SLE:	31	31	31	24	0	0	2	0	0	5*
RA:	41	41	41	40	0	0	1	0	0	0
GP:	38	0	-	-	0	-	-	38	-	-

WG = Wegener's granulomatosis, MP = microscopic polyangiitis RA = rheumatoid arthritis
SLE = systemic lupus erythematosus GP = Goodpasture syndrome
*All samples were positive in semi-quantitative MPO-ELISA.

Clinical sensitivity (Equivocal samples are not included in the calculation)

PR3-ANCA:	WG = 39/42 = 92.9 %	95% CI = 84.9 – 100%
	MP = 21/41 = 51.2 %	95% CI = 35.6 – 66.8%
MPO-ANCA:	WG = 4/41 = 9.8 %	95% CI = 4.9 – 19.0%
	MP = 20/43 = 46.5 %	95% CI = 31.3 – 61.7%
Anti-GBM:	GP = 38/38 = 100 %	95% CI = 92.2 – 100%

Clinical specificity (Equivocal samples are not included in the calculation)

PR3-ANCA:	SLE = 31/31 = 100 %	95% CI = 90.4 – 100%
	RA = 41/41 = 100 %	95% CI = 92.7 – 100%
	NS = 131/131 = 100 %	95% CI = 97.7 – 100%
MPO-ANCA:	SLE = 24/29 = 82.8 %	95% CI = 68.7 – 96.8%
	RA = 40/40 = 100 %	95% CI = 92.6 – 100%
	NS = 127/127 = 100 %	95% CI = 97.6 – 100%
Anti-GBM:	SLE = 31/31 = 100 %	95% CI = 90.4 – 100%
	RA = 41/41 = 100 %	95% CI = 92.7 – 100%
	NS = 128/128 = 100 %	95% CI = 97.6 – 100%

Table 2. Relative sensitivity and specificity of the Wielisa anti-GBM, ANCA screen kit compared to an alternative semi-quantitative ELISA. A total of 216 frozen retrospective sera were assayed on the Wielisa anti-GBM, ANCA screen kit and a semi-quantitative ELISA for PR-3 and MPO. Also, a total of 169 frozen retrospective sera were assayed on the Wielisa anti-GBM, ANCA screen kit and an semi-quantitative ELISA for anti-GBM. The following table summarises the results.

		Wielisa anti-GBM, ANCA screen								
Semi-quantitative ELISA		**Negative < 3**			**Equivocal**			**Positive >4**		
		GBM	**PR3**	**MPO**	**GBM**	**PR3**	**MPO**	**GBM**	**PR3**	**MPO**
MPO-ANCA	**Positive**	0	0	1	0	0	0	0	0	23
PR3-ANCA	**Positive**	0	1	0	0	0	0	0	59	0
Anti-GBM	**Positive**	0	-	-	0	-	-	37	-	-
	Negative	128	152	182	3	2	4	0	0	0
	Equivocal	0	1	4	0	0	1	1	1	1
	Total	128	154	187	3	2	5	38	60	24

Relative sensitivity (Equivocal samples are not included in the calculation)

Relative sensitivity PR3-ANCA = 59/60 = 98.3% 95% CI = 95.0 – 100%
Relative sensitivity MPO-ANCA = 23/24 = 95.8% 95% CI = 87.7 – 100%
Relative sensitivity anti-GBM = 37/37 = 100 % 95% CI = 92.0 – 100%

Relative specificity (Equivocal samples are not included in the calculation)

Relative specificity PR3-ANCA = 152/152 = 100 % 95% CI = 98.0 – 100%
Relative specificity MPO-ANCA= 182/182 = 100 % 95% CI = 98.4 – 100%
Relative specificity anti-GBM = 128/128 = 100 % 95% CI = 97.7 – 100%

Table 3. Batch to batch variation was determined by testing three different samples. Results were obtained for 4 different batches.

Sample PR3	Mean OD ratio	SD	CV%	Sample MPO	Mean OD ratio	SD	CV%	Sample GBM	Mean OD ratio	SD	CV%
2	37.5	3.8	10	3	16.8	2.2	13	1	21.8	2.1	9
5	24.3	3.6	15	6	31.5	1.9	6	4	29.0	2.2	4
8	35.5	2.4	7	9	28.3	1.5	5	7	33.8	2.4	7

Table 4. Inter-assay precision was determined by testing one sample. Results were obtained for six different runs.

Sample PR3	Mean OD ratio	SD	CV %	Sample MPO	Mean OD ratio	SD	CV %	Sample GBM	Mean OD ratio	SD	CV%
PK	27.3	2.9	11	PK	17.3	3.8	21	PK	16.5	1.1	6
K5	12.1	1.2	10	K6	16.5	0.84	5	K4	3.6	0.25	7

Table 5. Intra-assay precision was determined by testing one sample in 22 wells.

Sample PR3	Mean OD	SD	CV %	Sample MPO	Mean OD	SD	CV %	Sample GBM	Mean OD	SD	CV%
PK	1.3	0.07	6	PK	1.8	0.06	3	PK	1.2	0.19	16
K5	1.3	0.06	5	K6	1.46	0.07	5	K4	0.6	0.03	6

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
2098 Gaither Road
Rockville MD 20850

JUL 22 1998

Weislab AB
c/o William L. Boteler, Jr.
IMMUNO PROBE, INC.
1306 Bailes Lane, Suite F
Frederick, MD 21701

Re: K981750
Trade Name: Wielisa Anti-GBM, ANCA Screening Test Kit
Regulatory Class: II
Product Code: DBL, MOB
Dated: May 3, 1998
Received: May 18, 1998

Dear Mr. Boteler:

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: ~~Not known~~ K981750

Device Name: Wielisa Anti-GBM, ANCA Screening Test Kit

Indications For Use: The Wielisa Anti-GBM, ANCA Screening Test Kit is an enzyme-linked immunosorbent assay (ELISA) for the qualitative detection of antibodies to glomerular basement membrane (GBM), Proteinase-3 (PR-3) and Myeloperoxidase (MPO) in human sera. The assay is used to detect antibodies in a single serum specimen. The results of the assay are to be used as an aid to the diagnosis of reno-pulmonary syndromes and rapidly progressive glomerulonephritis, especially Goodpasture syndrome (GP), Wegener's granulomatosis (WG) and microcopic polyangiitis (MP). The assay is intended for use in patients with signs and symptoms consistent with GP, WG, and MP. It is not intended for screening a healthy population. A positive result should always be confirmed by a semi-quantitative assay.

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use ✓
(Per 21 CFR 801.109)

OR

Over-The Counter Use ____
(Optional Format 1-2-96)

Peter E. Maxim

(Division Sign-Off)
Division of Clinical Laboratory Devices
510(k) Number K981750