

**Centers for Disease Control and Prevention  
Model Performance Evaluation Program  
Human Immunodeficiency Virus Type 1 (HIV-1)  
Antibody Testing**

**Figures Used for the Analysis  
of the January 26, 1998 Performance Evaluation  
Testing Results Reported by Participant Laboratories**

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Public Health Service  
Centers for Disease Control and Prevention  
Public Health Practice Program Office  
Division of Laboratory Systems  
Atlanta, Georgia 30333**



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Public Health Service or by the  
U.S. Department of Health and Human Services.**

Report of the January 26, 1998 Human Immunodeficiency virus type I (HIV-1) Antibody Performance Evaluation Sample Testing Results Provided by Participant Laboratories in the Model Performance Evaluation Program, Centers for Disease Control and Prevention (CDC).

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**Centers for Disease Control and Prevention (CDC)  
 Model Performance Evaluation Program  
 Human Immunodeficiency Virus Type 1 (HIV-1) Antibody Testing  
 January 26, 1998 Participant Laboratory Shipment**

**Table 1**

Panel Letter	Vial Label	CDC Donor Number	CDC Result <sup>2</sup>	Laboratory Interpretation <sup>1</sup>			
				EIA		WB	IIF
				INIT. <sup>3</sup>	FINAL <sup>4</sup>		
H	H1	17	Positive	—	—	—	—
	H2	01	Positive	—	—	—	—
	H3, H4	08	Positive	—	—	—	—
	H5, H6	15	Negative	—	—	—	—
I	I1	02	Positive	—	—	—	—
	I2	18	Positive	—	—	—	—
	I3, I4	09	Positive	—	—	—	—
	I5, I6	16	Negative	—	—	—	—
J	J1, J4	15	Negative	—	—	—	—
	J2, J5	10	Positive	—	—	—	—
	J3	17	Positive	—	—	—	—
	J6	03	Positive	—	—	—	—
K	K1	04	Positive	—	—	—	—
	K2, K5	11	Positive	—	—	—	—
	K3, K6	16	Negative	—	—	—	—
	K4	18	Positive	—	—	—	—

Table 1, Continued ►►

**Table 1, Continued**

Panel Letter	Vial Label	CDC Donor Number	CDC Result <sup>2</sup>	Laboratory Interpretation <sup>1</sup>			
				EIA INIT. <sup>3</sup>	EIA FINAL <sup>4</sup>	WB	IIF
L	L1, L4	15	Negative	—	—	—	—
	L2	05	Positive	—	—	—	—
	L3, L6	12	Positive	—	—	—	—
	L5	17	Positive	—	—	—	—
M	M1, M4	13	Positive	—	—	—	—
	M2, M5	16	Negative	—	—	—	—
	M3	06	Positive	—	—	—	—
	M6	18	Positive	—	—	—	—
N	N1	17	Positive	—	—	—	—
	N2, N5	14	Positive	—	—	—	—
	N3, N6	15	Negative	—	—	—	—
	N4	07	Positive	—	—	—	—

<sup>1</sup> Laboratory Interpretation space (to be completed by participant laboratory) provided to facilitate comparison of participant laboratory result with CDC result.

<sup>2</sup> The CDC result was obtained after composite testing with all HIV-1 and HIV-1/HIV-2 EIA and HIV-1 WB kits licensed by the Food and Drug Administration (FDA), and employing the WB interpretive criteria of the Association of State and Territorial Public Health Laboratory Directors/CDC (ASTPHLD/CDC).

<sup>3</sup> Initial EIA interpretation

<sup>4</sup> Final EIA interpretation

**Centers for Disease Control and Prevention (CDC)  
Model Performance Evaluation Program for  
Human Immunodeficiency Virus Type I (HIV-1) Antibody Testing**

**Table 2. CDC Western Blot (WB) Testing Results for the  
January 26, 1998 Participant Laboratory Panel Samples**

Panel Letter	Vial Label	CDC Donor Number	CDC Western Blot Test Results <sup>1</sup> Specific WB Bands Detected	WB Test Kit Manufacturer	CDC Interpretation <sup>2</sup>
H	H1	17	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 18,24,31,41,51,65,160	BioRad Cambridge Biotech Epitope/Organon *	Positive Positive Positive
	H2	01	18,24,55,160 24,51,66,120,160 24,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	H3, H4	08	24,55,160 24,160 24	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Indeterminate
	H5, H6	15	No Bands	All Manufacturers	Negative
I	I1	02	18,24,32,41,55,65,120,160 24,31,41,51,66,120,160 24,31,41,51,65,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	I2	18	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 24,31,41,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	I3, I4	09	18,24,55,160 17,24,160 24	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Indeterminate
	I5, I6	16	No Bands	All Manufacturers	Negative
J	J1, J4	15	No Bands	All Manufacturers	Negative
	J2, J5	10	24,32,41,51,55,65,120,160 24,31,41,51,66,120,160 24,31,41,51,65,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	J3	17	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 18,24,31,41,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	J6	03	18,24,32,55,65,160 17,24,31,41,51,55,66,120,160 24,51,55,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
K	K1	04	24,41,55,160 24,160 24,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	K2, K5	11	18,24,55,160 17,24,160 24	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Indeterminate
	K3, K6	16	No Bands	All Manufacturers	Negative
	K4	18	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 24,31,41,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive

<sup>1</sup> Western blot (WB) result based on band intensity of  $\geq 1+$  staining.

<sup>2</sup> The CDC interpretation is consistent with the manufacturer's criteria for interpretation of WB results.

\* bioMerieux Vitek/Cambridge Biotech

Table 2, Continued

Panel Letter	Vial Label	CDC Donor Number	CDC Western Blot Test Results Specific WB Bands Detected <sup>1</sup>	WB Test Kit Manufacturer	CDC Interpretation <sup>2</sup>
L	L1, L4	15	No Bands	All Manufacturers	Negative
	L2	05	24,55,160 24,160 24	BioRad Cambridge Biotech Epitope/Organon *	Positive Positive Indeterminate
	L3, L6	12	18,24,32,41,55,65,160 24,41,51,55,66,120,160 24,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	L5	17	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 18,24,31,41,51,65,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
M	M1, M4	13	24,55,160 24,120,160 24	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Indeterminate
	M2, M5	16	No Bands	All Manufacturers	Negative
	M3	06	18,24,55,160 17,24,55,66,120,160 18,24,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	M6	18	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 24,31,41,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
N	N1	17	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 18,24,31,41,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	N2, N5	14	18,24,55,65,160 24,41,51,55,66,120,160 24,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	N3, N6	15	No Bands	All Manufacturers	Negative
	N4	07	24,41,55,65,160 24,51,66,120,160 24,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive

<sup>1</sup> Western blot (WB) result based on band intensity of  $\geq 1+$  staining.

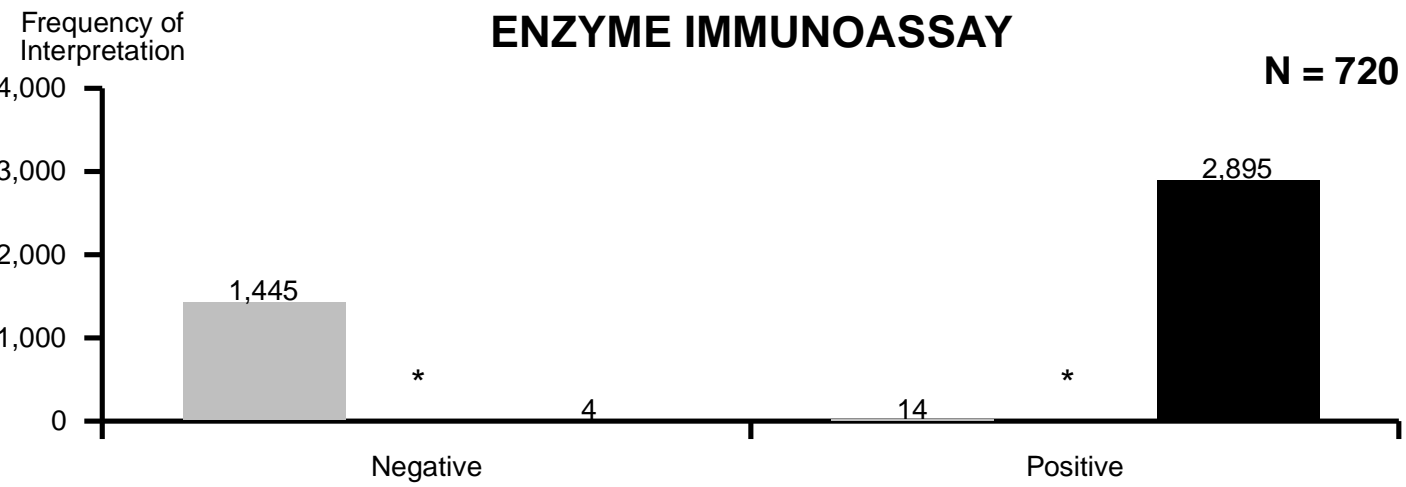
<sup>2</sup> The CDC interpretation is consistent with the manufacturer's criteria for interpretation of WB results .

\* BioMerieux Vitek/Cambridge Biotech

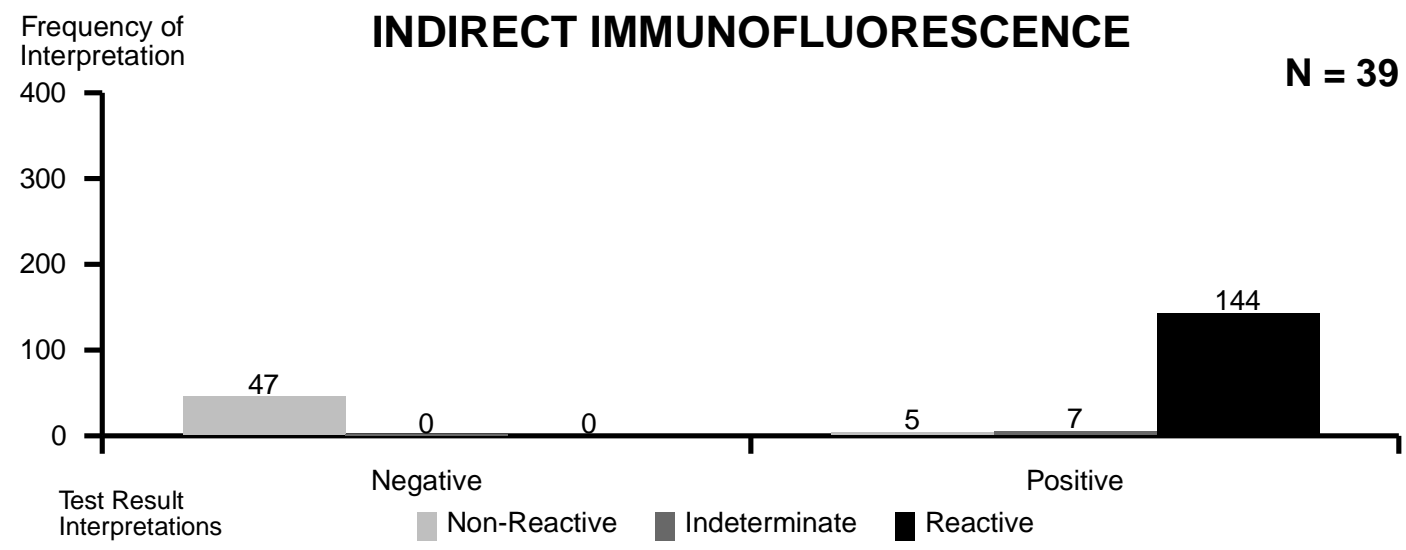
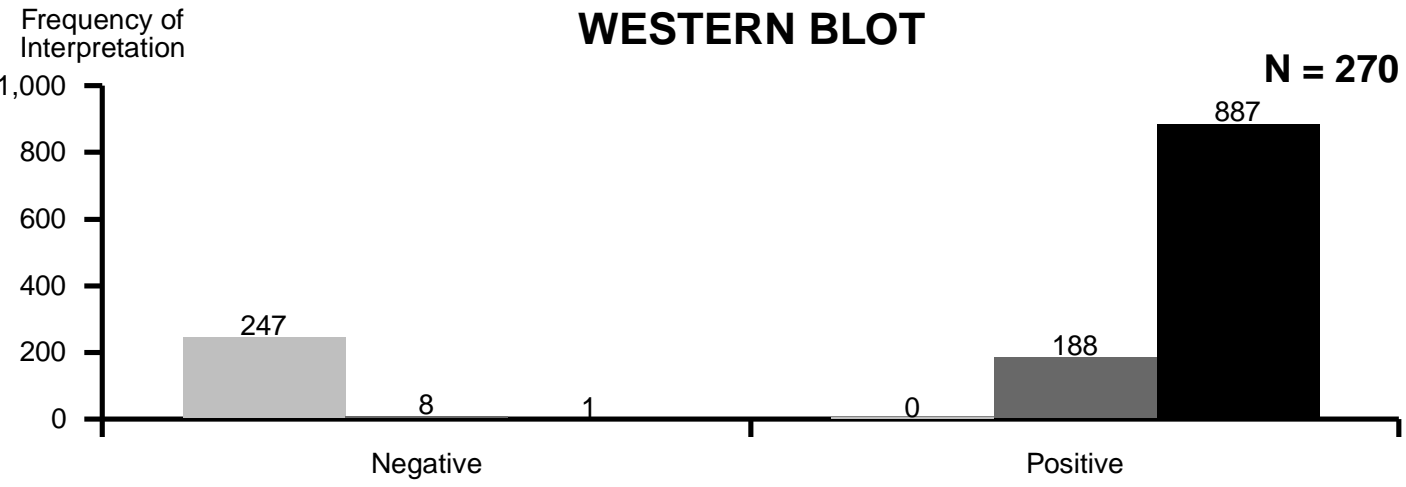
**SUPPLEMENTAL INFORMATION FOR COMPREHENDING  
THE NUMBERS USED TO LABEL FIGURES  
IN THIS REPORT**

The "N=" that appears on each graph represents the number of laboratories that reported results. For some graphs, laboratories reported results using more than one test; therefore, the number of results may exceed the actual number of laboratories providing reports. In figures 1-7 and 10, the vertical axis is labeled either as frequency or percentage of results; in figures 8 and 9, this axis is labeled as percentage of reports. However, in all figures, the number appearing directly above or within each bar represents a frequency of results only.

**Figure 1. Frequency of HIV-1 antibody test result interpretations, by sample type (reactivity), for enzyme immunoassay (EIA), Western blot (WB), and indirect immunofluorescence (IIF), reported by participant laboratories for the January 26, 1998 shipment**

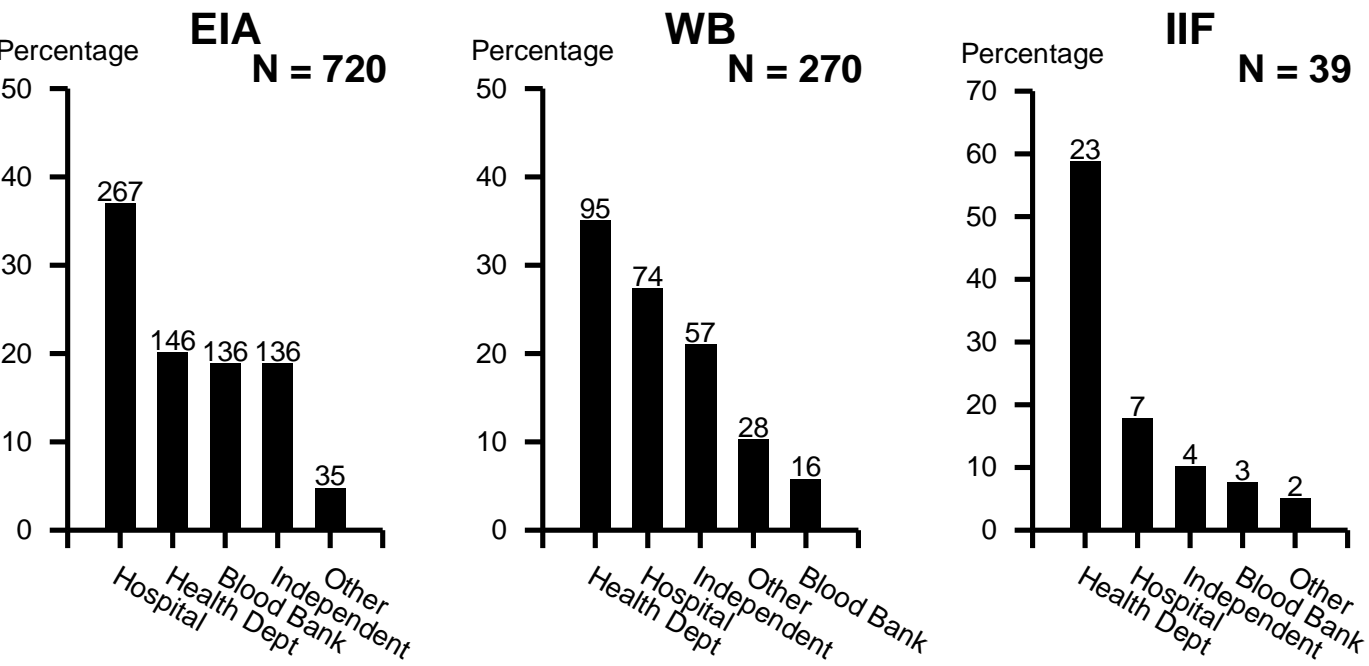


\* = Indeterminate is not an EIA interpretation option; these areas have been left blank

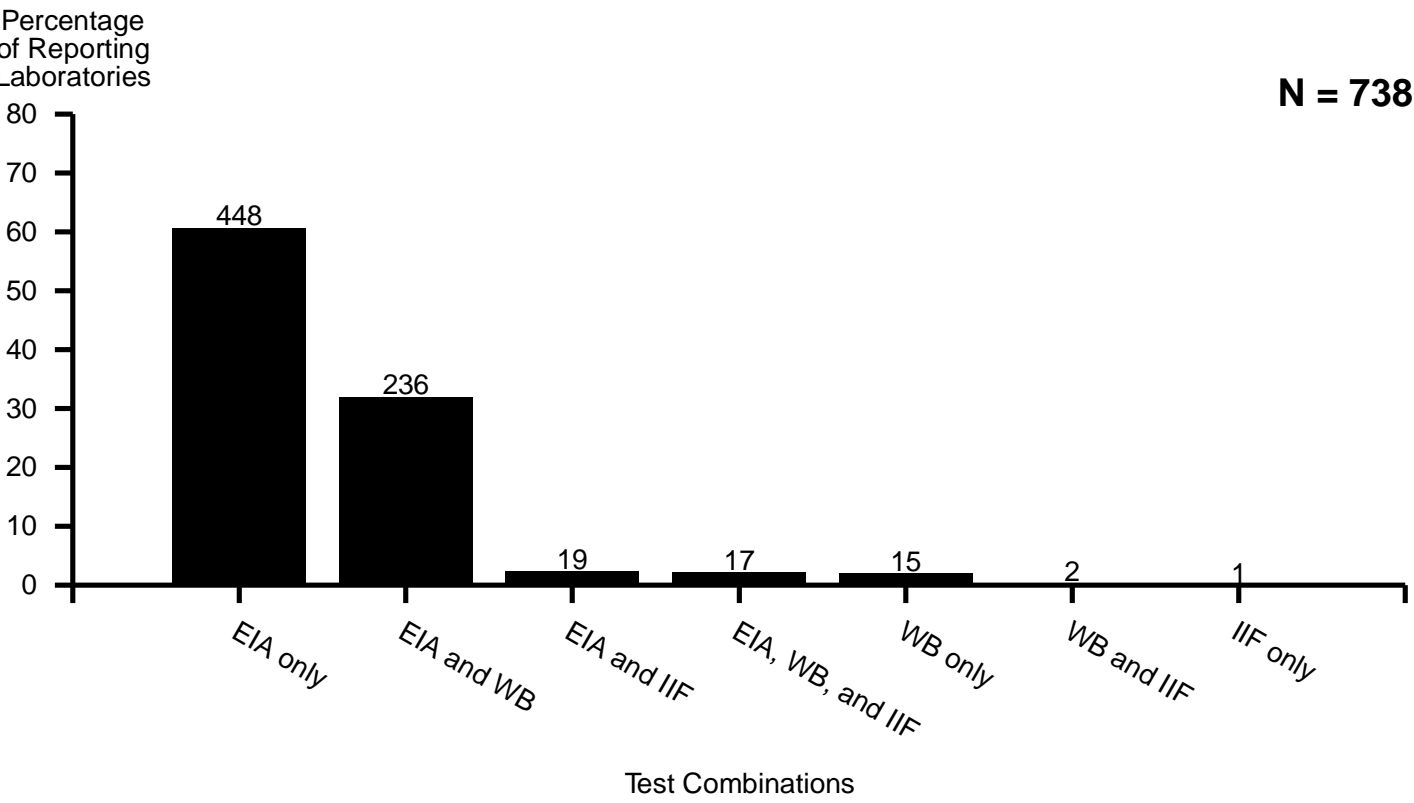




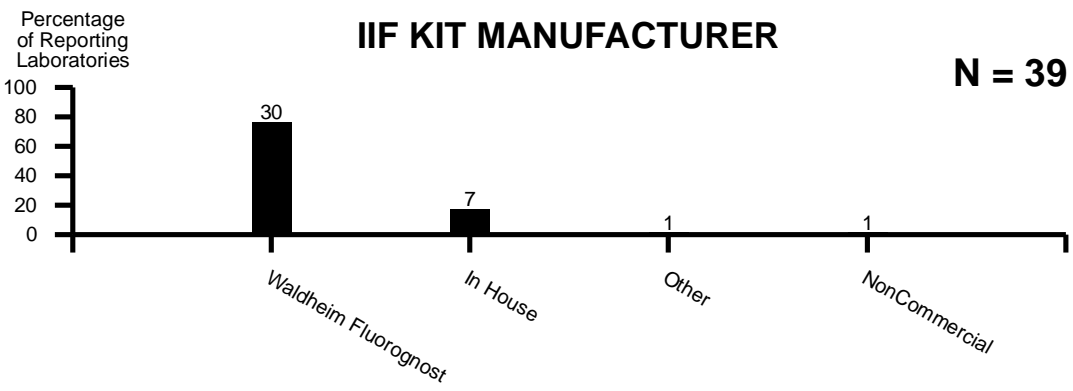
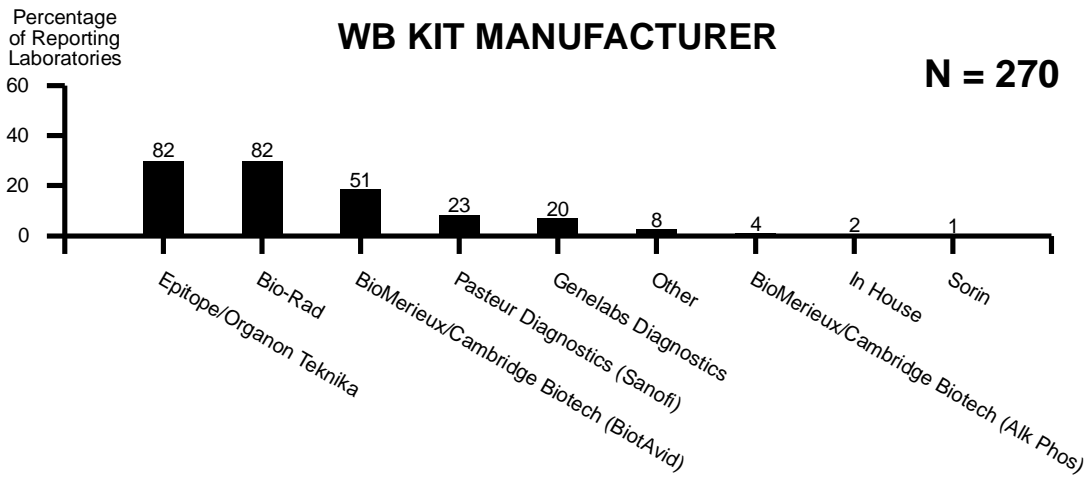
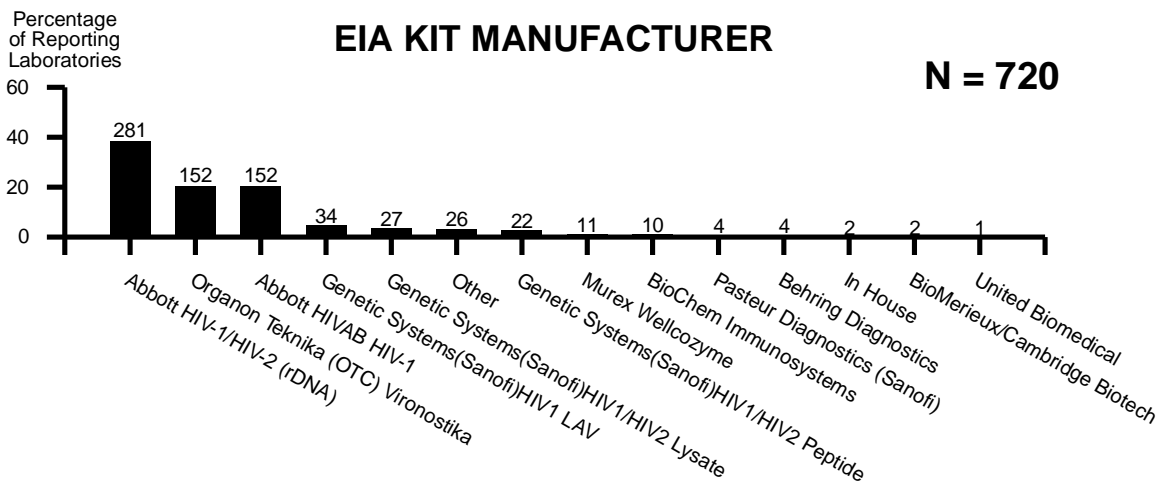
**Figure 2. Percentage of HIV-1 participant laboratories, by laboratory type, that reported EIA, WB, and IIF results to the CDC for the January 26, 1998 shipment**



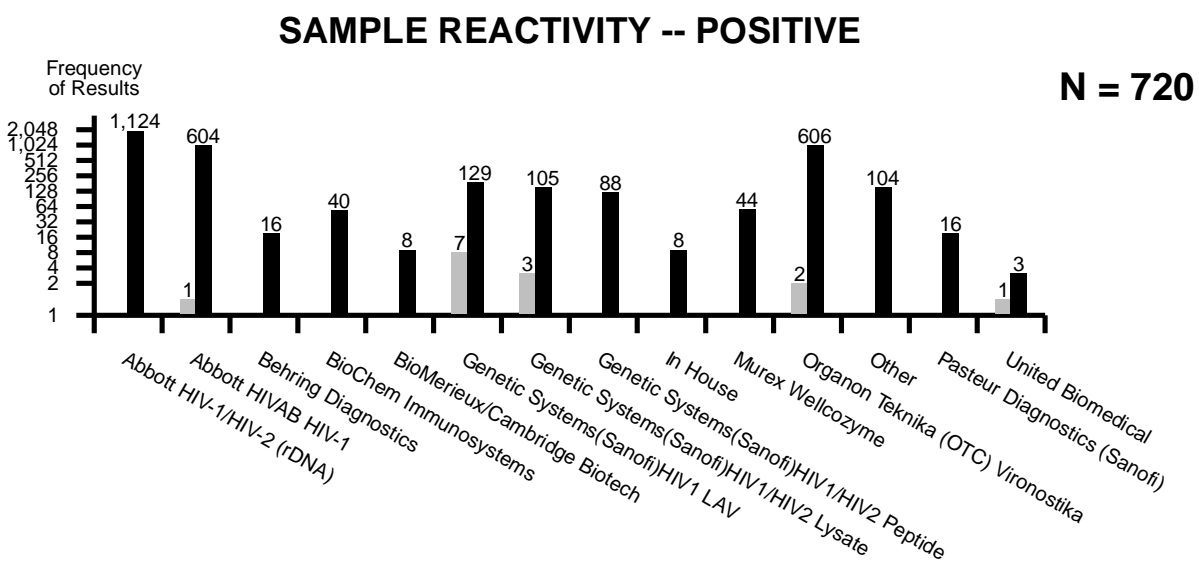
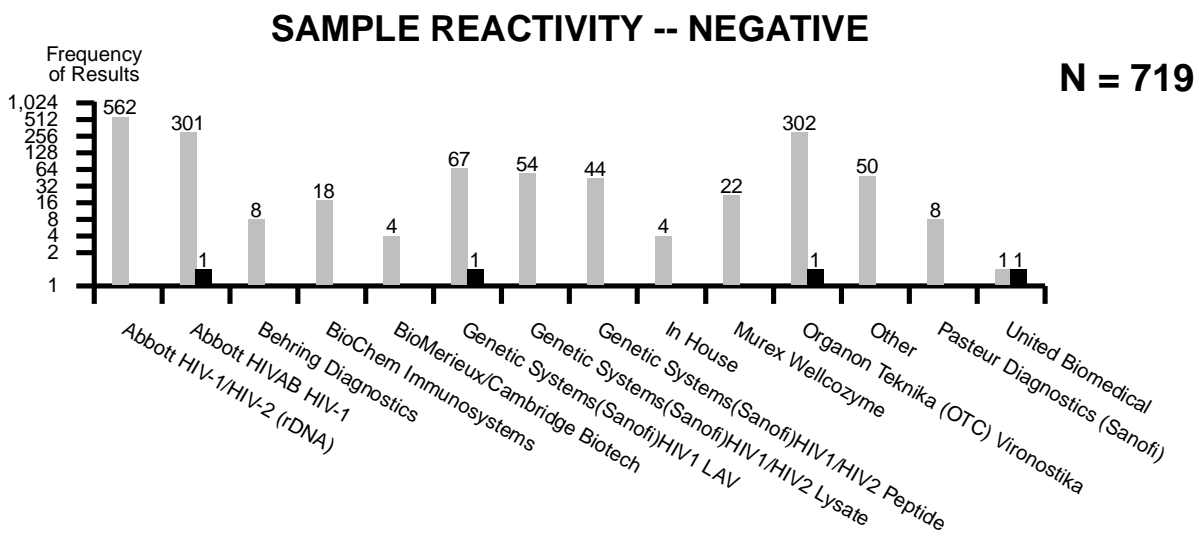
**Figure 3. Combination of HIV-1 antibody tests reported by participant laboratories for the January 26, 1998 shipment**



**Figure 4. Types of HIV-1 antibody test kits used for enzyme immunoassay, Western blot, and indirect immunofluorescence, as reported by participant laboratories to the CDC for the January 26, 1998 shipment**



**Figure 5. Enzyme immunoassay HIV-1 antibody test results, by kit manufacturer, reported by participant laboratories for the January 26, 1998 shipment**

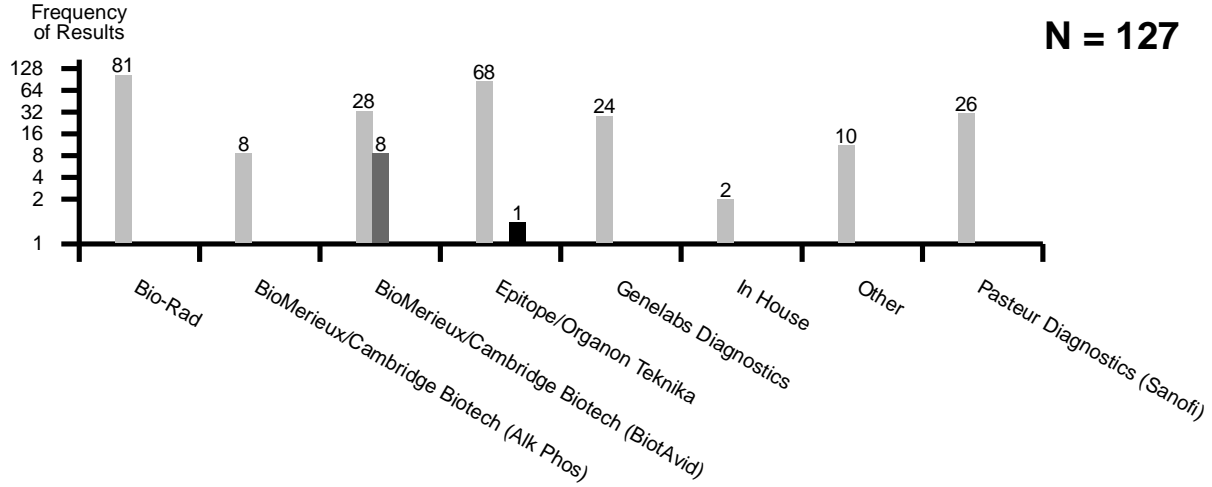


Test Result Interpretations

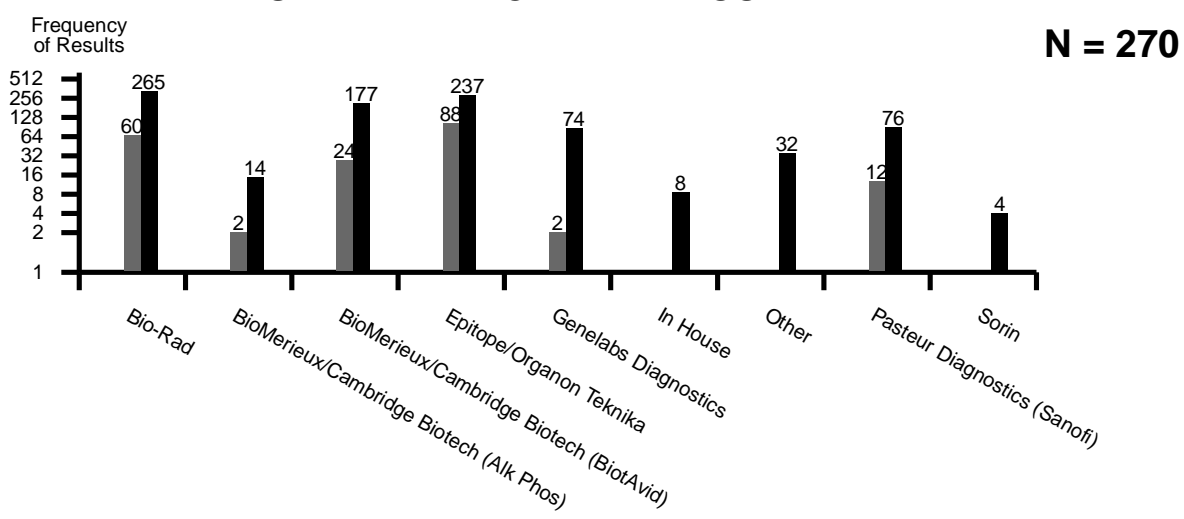
■ Non-Reactive   ■ Reactive

**Figure 6. Western blot HIV-1 antibody test results, by kit manufacturer, reported by participant laboratories for the January 26, 1998 shipment**

**SAMPLE REACTIVITY -- NEGATIVE**



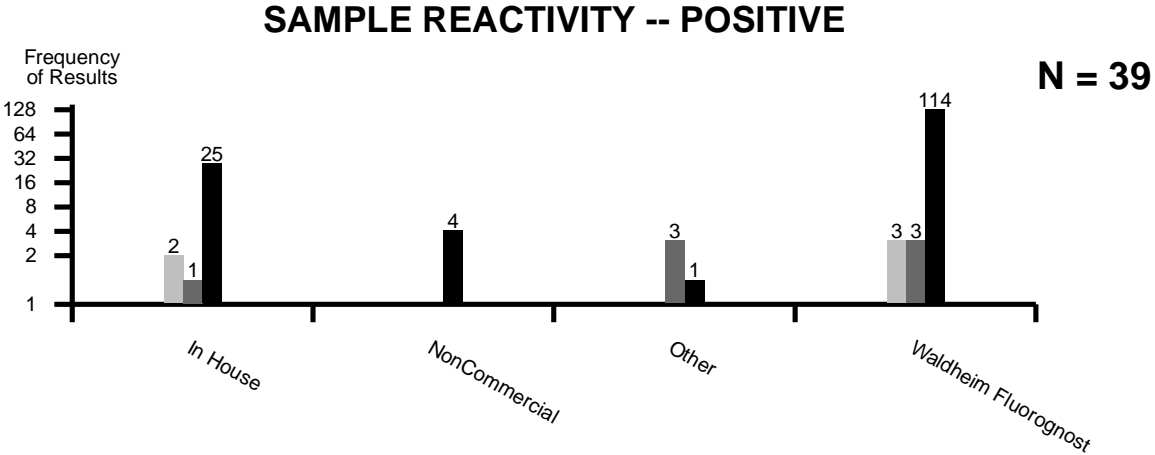
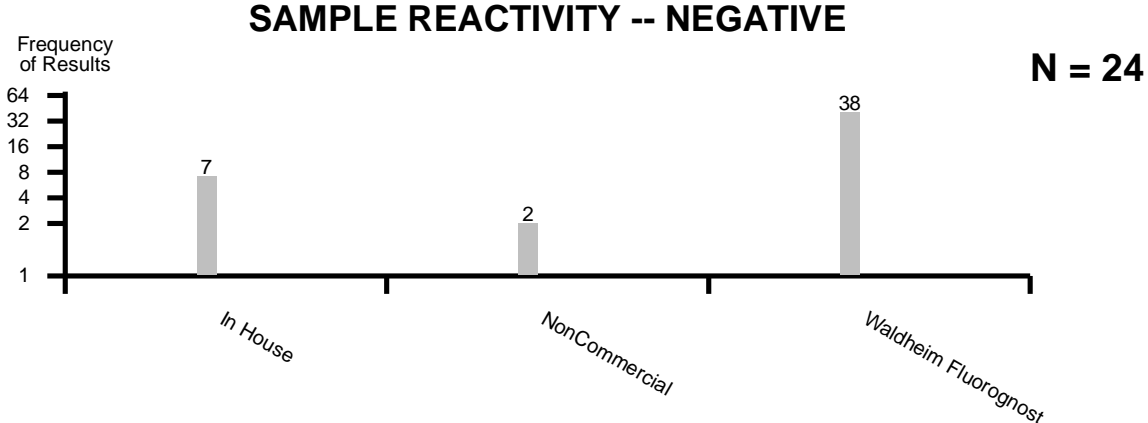
**SAMPLE REACTIVITY -- POSITIVE**



Test Result Interpretations

■ Non-Reactive   ■ Indeterminate   ■ Reactive

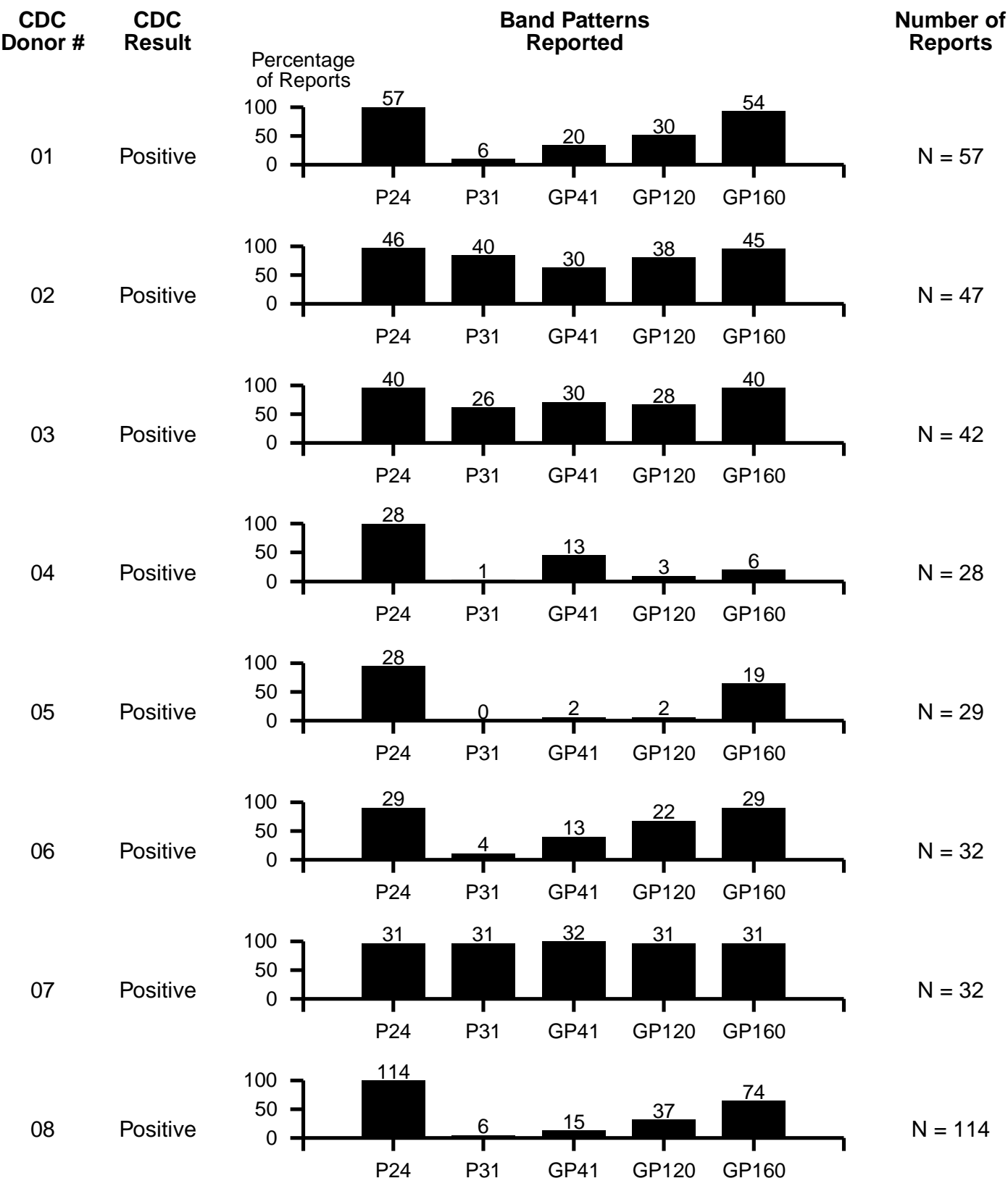
**Figure 7. Indirect immunofluorescence HIV-1 antibody test results, by kit manufacturer, reported by participant laboratories for the January 26, 1998 shipment**



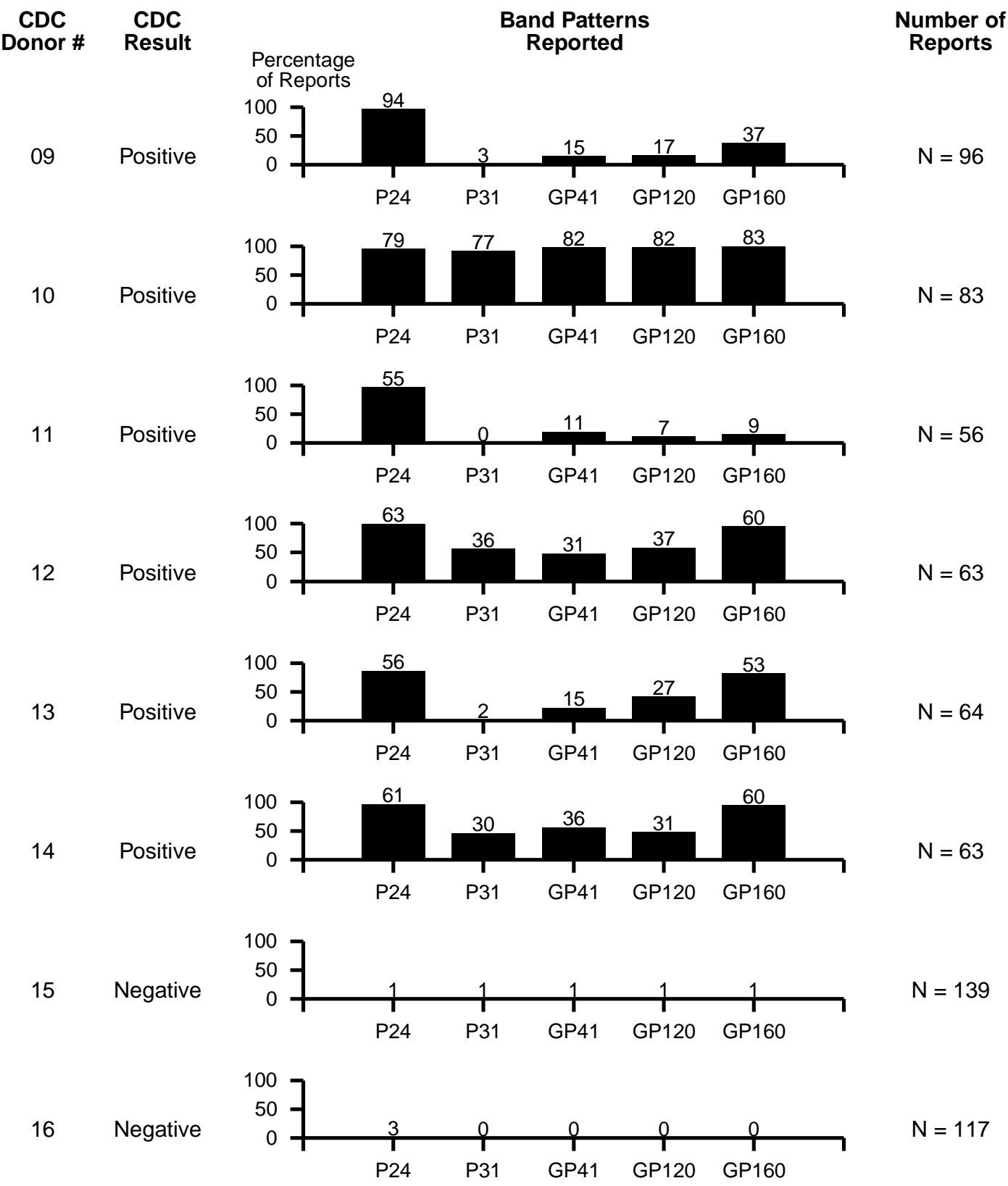
Test Result Interpretations

Non-Reactive
  Indeterminate
  Reactive

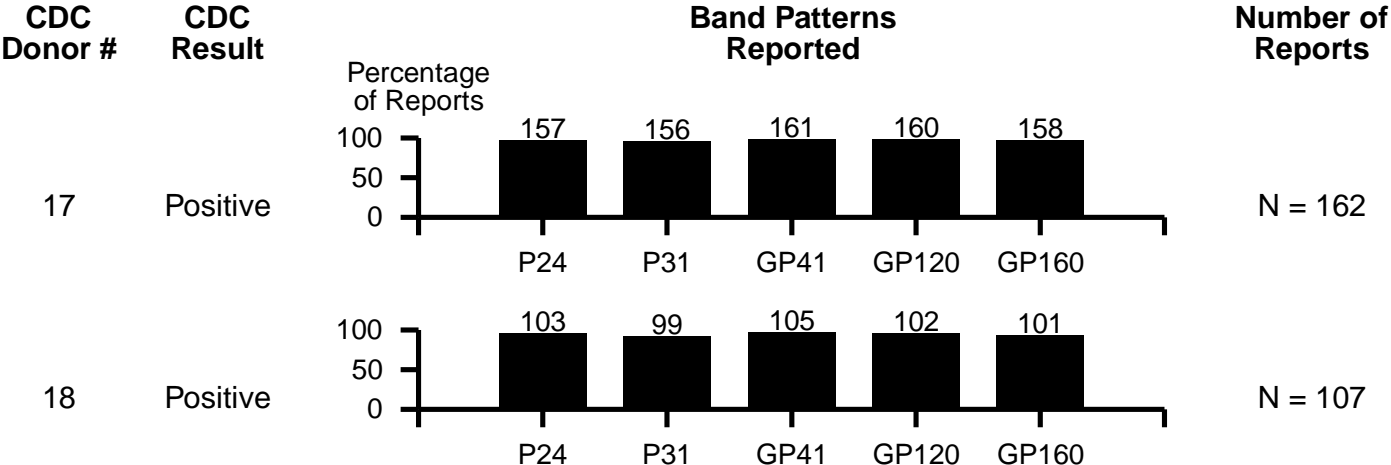
**Figure 8. Western blot HIV-1 antibody band patterns reported to CDC by participant laboratories for the January 26, 1998 shipment**



**Figure 8. Western blot HIV-1 antibody band patterns reported to CDC by participant laboratories for the January 26, 1998 shipment**

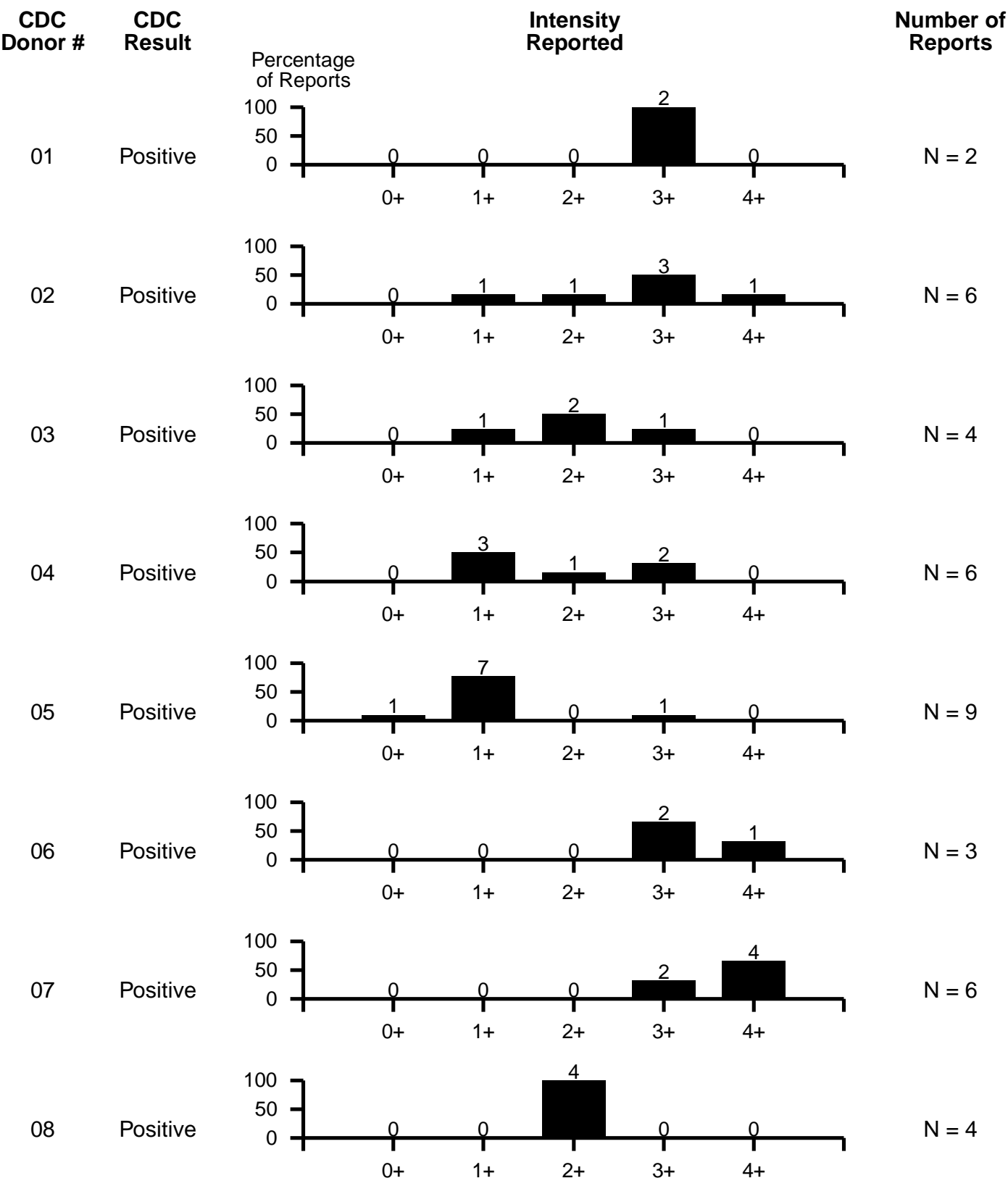


**Figure 8. Western blot HIV-1 antibody band patterns reported to CDC by participant laboratories for the January 26, 1998 shipment**

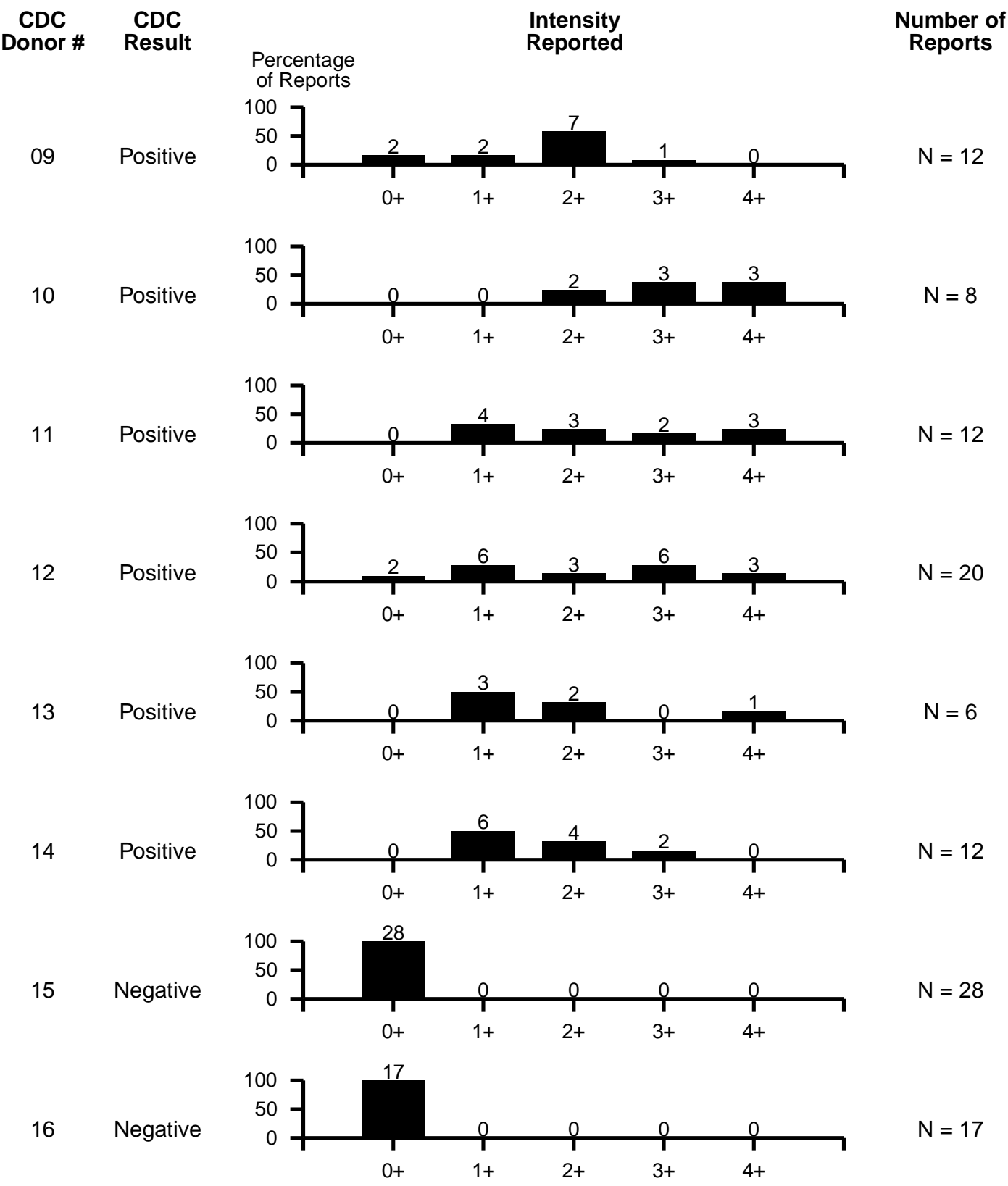




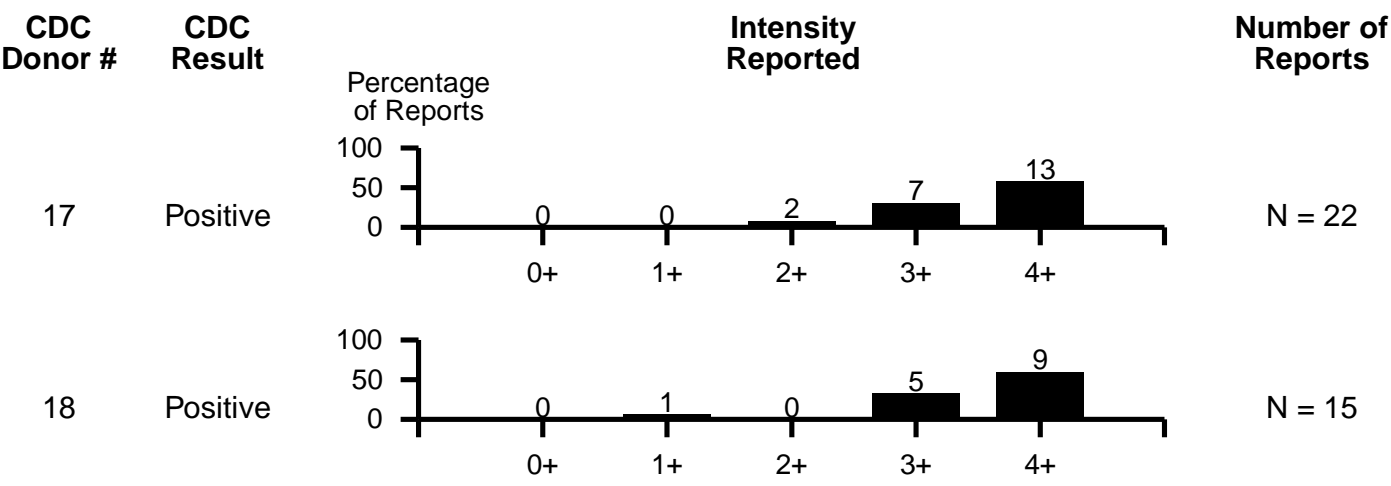
**Figure 9. Fluorescence intensity patterns, of HIV-1-infected cells, for IIF results reported to CDC by participant laboratories for the January 26, 1998 shipment**



**Figure 9. Fluorescence intensity patterns, of HIV-1-infected cells, for IIF results reported to CDC by participant laboratories for the January 26, 1998 shipment**



**Figure 9. Fluorescence intensity patterns, of HIV-1-infected cells, for IIF results reported to CDC by participant laboratories for the January 26, 1998 shipment**



**Figure 10. Types of 'Other' HIV antibody test kits used and results reported by participant laboratories to the CDC for the January 26, 1998 shipment**

