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

Figures Used for the
Analysis of the August 19, 1996
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

Report of the August 19, 1996 Human Immunodeficiency virus type I (HIV-1) Performance Evaluation Sample Testing Results Provided by Participant Laboratories in the Model Performance Evaluation Program, Centers for Disease Control and Prevention (CDC).

The production of this report was coordinated in CDC by:

Public Health Practice Program Office.....Edward L. Baker, M.D., M.P.H., Director
Division of Laboratory Systems..... ...Carlyn L. Collins, M.D., M.P.H., Director
Laboratory Practice Assessment Branch.....Thomas L. Hearn, Ph.D., Chief

The material in this report was developed and prepared by:

Model Performance Evaluation Program (MPEP).....William O. Schalla, M.S., Chief
MPEP Retroviral Performance Evaluation.....Sharon O. Blumer, M.S.
Retroviral Project Coordinator

Information about this report should be addressed to the Model Performance Evaluation Program by calling (770) 488-4147 or (770) 488-4366.

Centers for Disease Control and Prevention (CDC)
Model Performance Evaluation Program
Human Immunodeficiency Virus Type 1 (HIV-1) Antibody Testing
August 19, 1996 Participant Laboratory Shipment

Panel Letter	Vial Label	CDC Donor Number	CDC Result[2]	Laboratory Interpretation[1]			
				EIA			
				INIT.[3]	FINAL[4]	WB	IIF
A	A01	05	Negative	___	___	___	___
	A02	15	Positive	___	___	___	___
	A03	07	Negative	___	___	___	___
	A04	11	Positive	___	___	___	___
	A05, A06	01	Positive	___	___	___	___
B	B01, B04	02	Positive	___	___	___	___
	B02	06	Negative	___	___	___	___
	B03	12	Positive	___	___	___	___
	B05	16	Positive	___	___	___	___
	B06	08	Negative	___	___	___	___
C	C01	17	Positive	___	___	___	___
	C02	13	Positive	___	___	___	___
	C03	09	Negative	___	___	___	___
	C04, C05	03	Positive	___	___	___	___
	C06	05	Negative	___	___	___	___
D	D01	10	Negative	___	___	___	___
	D02	14	Positive	___	___	___	___
	D03, D06	04	Positive	___	___	___	___
	D04	06	Negative	___	___	___	___
	D05	18	Positive	___	___	___	___

[1] Laboratory Interpretation space (to be completed by participant laboratory) provided to facilitate comparison of participant laboratory result with CDC result.

[2] 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).

[3] Initial EIA interpretation

[4] Final EIA interpretation

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

CDC Western Blot (WB) Testing Results for the
August 19, 1996 Participant Laboratory Panel Samples

Panel Letter	Vial Label	CDC Donor Number	CDC Western Blot Test Results Specific WB Bands Detected [1]	WB Test Kit Manufacturer	CDC Interpretation[2]
A	A01	05	No Bands	All Manufacturers	Negative
	A02	15	18,24,55,160 17,24,160 24	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Indeterminate
	A03	07	No Bands	All Manufacturers	Negative
	A04	11	18,24,32,51,55,65,120,160 17,24,31,41,51,66,120,160 24,51,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	A05, A06	01	18,24,32,41,51,55,65,120,160 17,24,31,41,51,66,120,160 24,31,41,51,55,65,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
B	B01, B04	02	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 18,24,31,41,51,55,65,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	B02	06	No Bands	All Manufacturers	Negative
	B03	12	24,41,55,120,160 24,41,66,120,160 24,41,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	B05	16	18,24,41,55,120,160 17,24,120,160 24,55	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Indeterminate
	B06	08	No Bands	All Manufacturers	Negative
C	C01	17	18,24,55,65,160 24,66,120,160 24,65,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	C02	13	24,55 24,120,160 24	BioRad Cambridge Biotech Epitope/Organon	Indeterminate Positive Indeterminate
	C03	09	No Bands	All Manufacturers	Negative
	C04, C05	03	18,24,32,41,51,55,65,120,160 17,24,31,41,51,55,66,120,160 18,24,31,41,51,55,65,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	C06	05	No Bands	All Manufacturers	Negative
D	D01	10	No Bands	All Manufacturers	Negative
	D02	14	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
	D03, D06	04	18,24,32,41,51,55,65,120,160 17,24,31,41,51,66,120,160 24,31,41,51,65,120,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive
	D04	06	No Bands	All Manufacturers	Negative
	D05	18	18,24,55,160 17,24,51,120,160 24,160	BioRad Cambridge Biotech Epitope/Organon	Positive Positive Positive

[1] Western blot (WB) result based on band intensity of $\geq$ 1+ staining.

[2] The CDC interpretation is consistent with the manufacturer's criteria for interpretation of WB results.

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 the enzyme immunoassay (EIA), Western blot (WB), and indirect immunofluorescence (IIF), reported by participant laboratories for the August 19, 1996 shipment

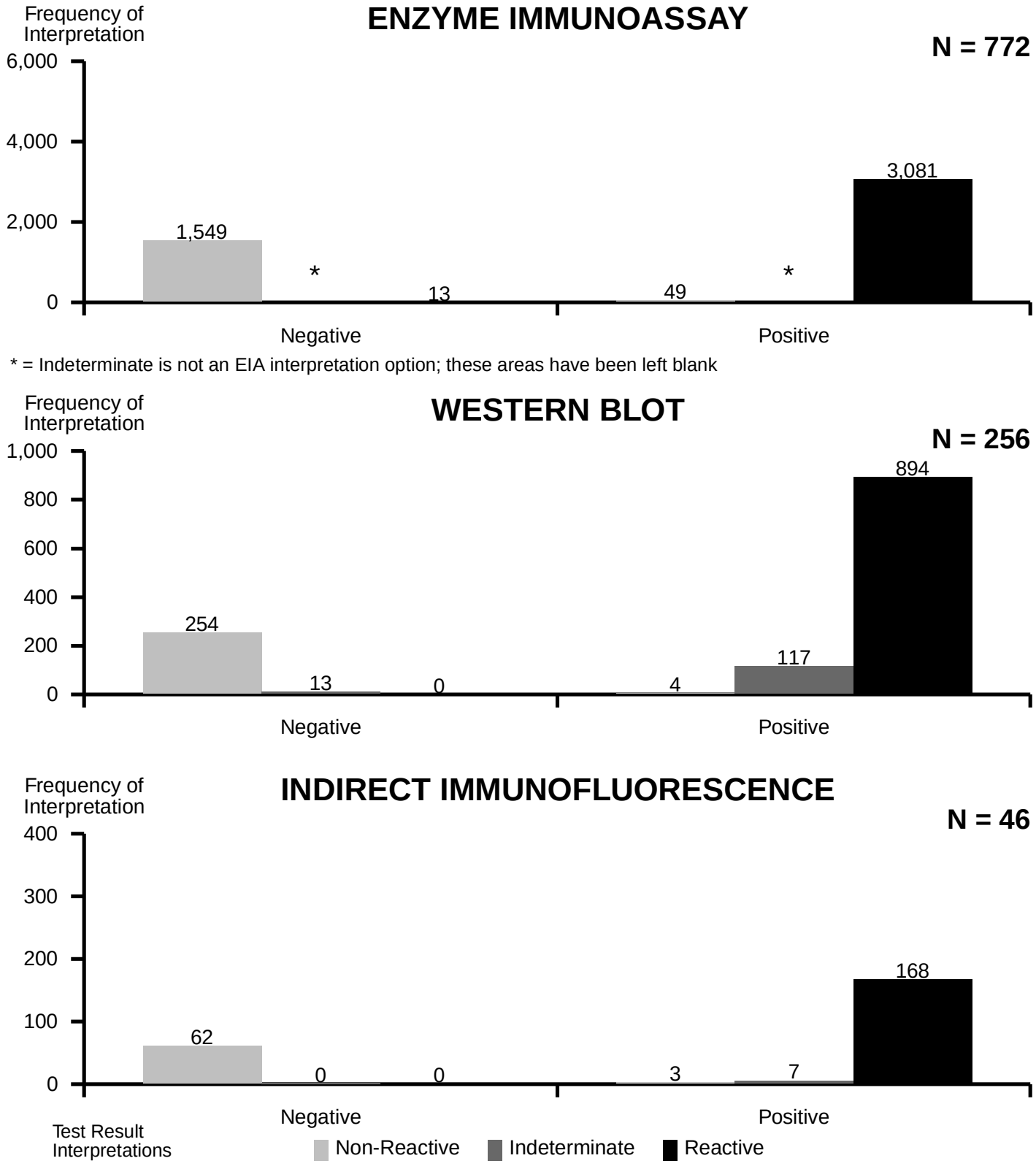


Figure 2. Percentage of HIV-1 participant laboratories, by laboratory type, that reported results to the CDC for the August 19, 1996 shipment

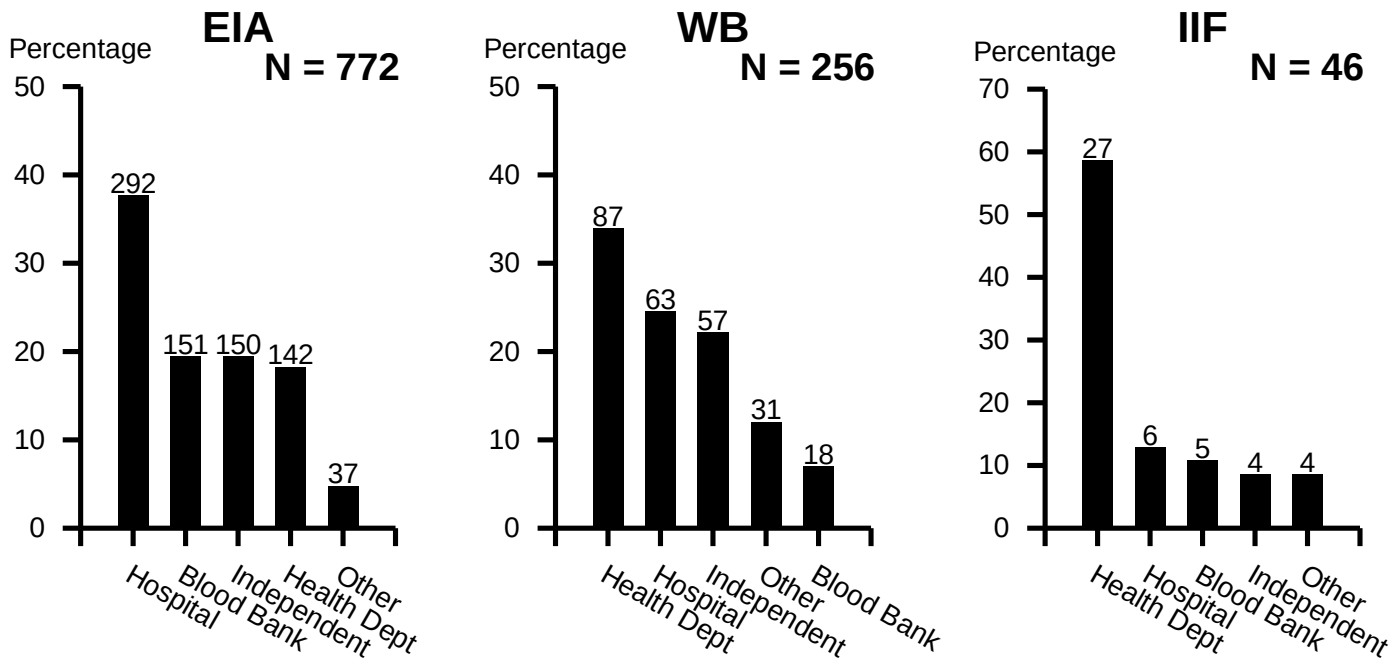


Figure 3. Combination of HIV-1 tests reported by participant laboratories for the August 19, 1996 shipment

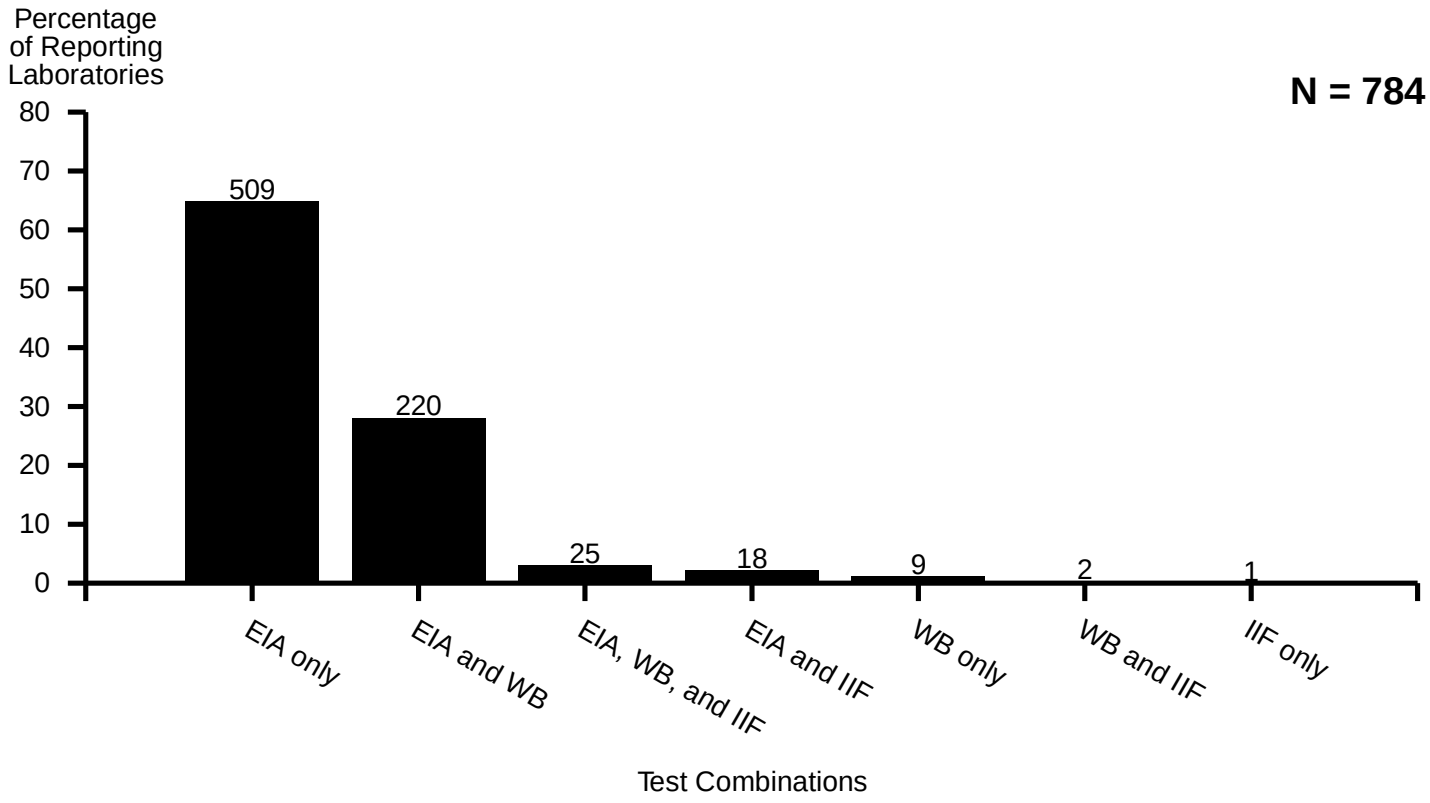
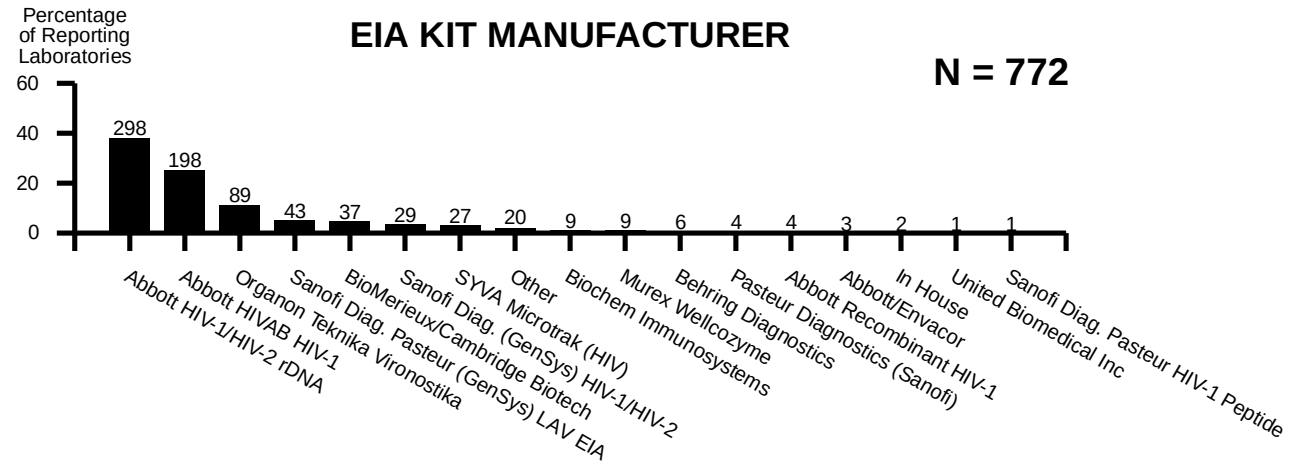
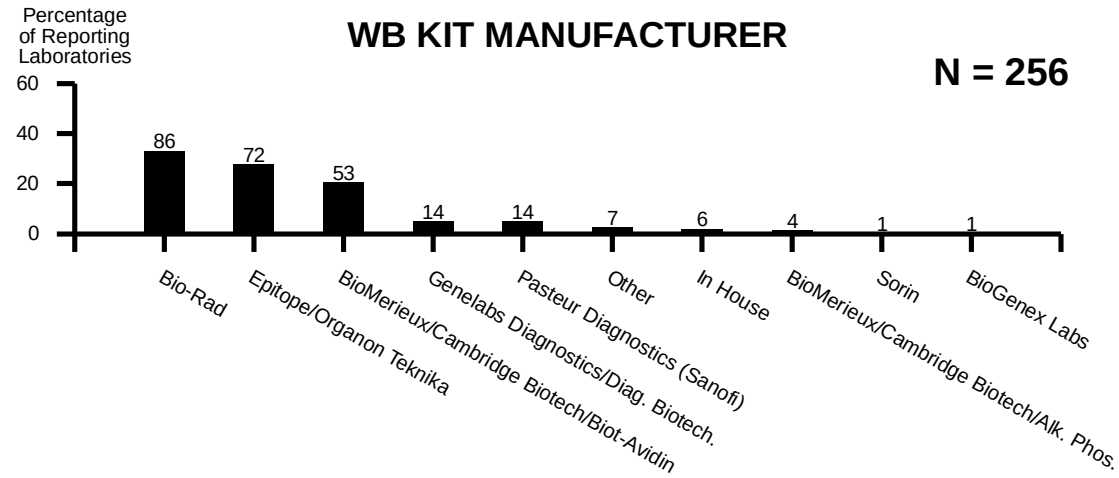


Figure 4. Types of HIV-1 kits used for enzyme immunoassay, Western blot, and indirect immunofluorescence, as reported by participant laboratories to the CDC for the August 19, 1996 shipment





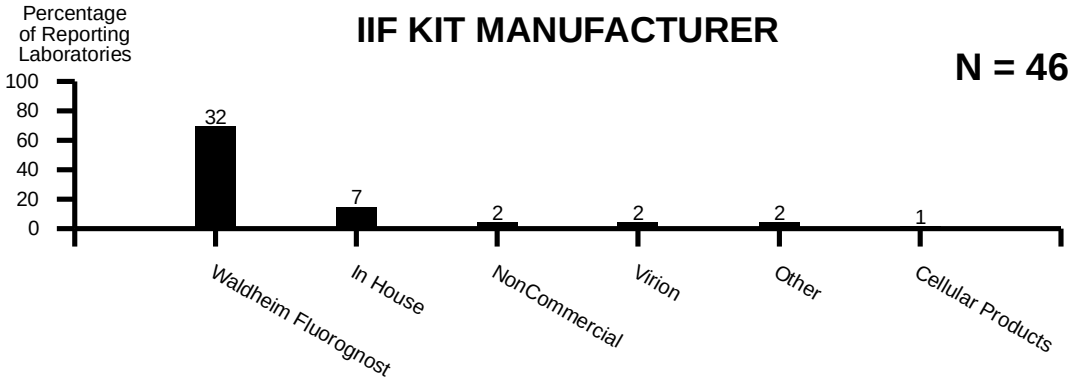


Figure 5. Enzyme immunoassay HIV-1 results, by kit manufacturer, reported by participant laboratories for the August 19, 1996 shipment

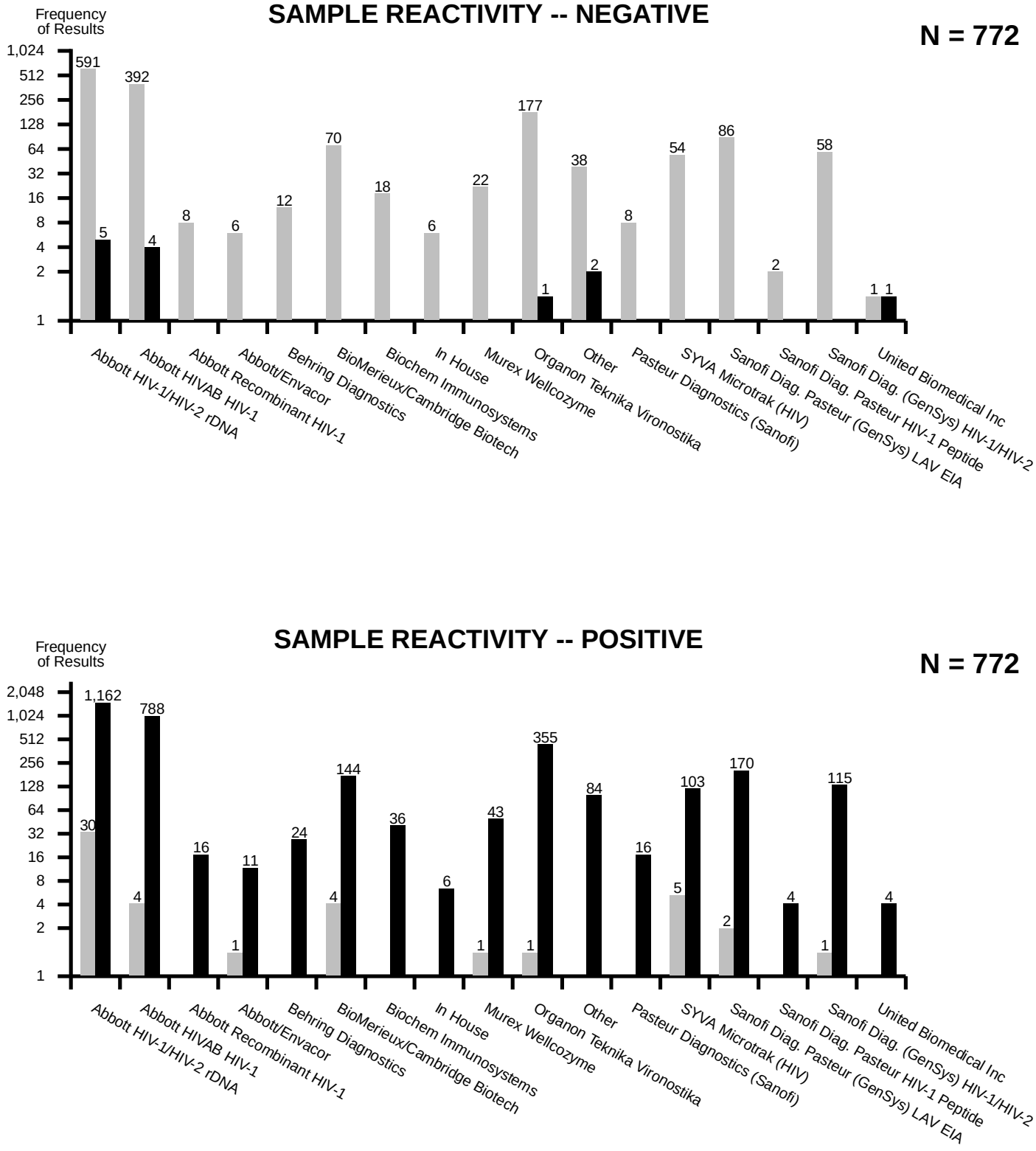
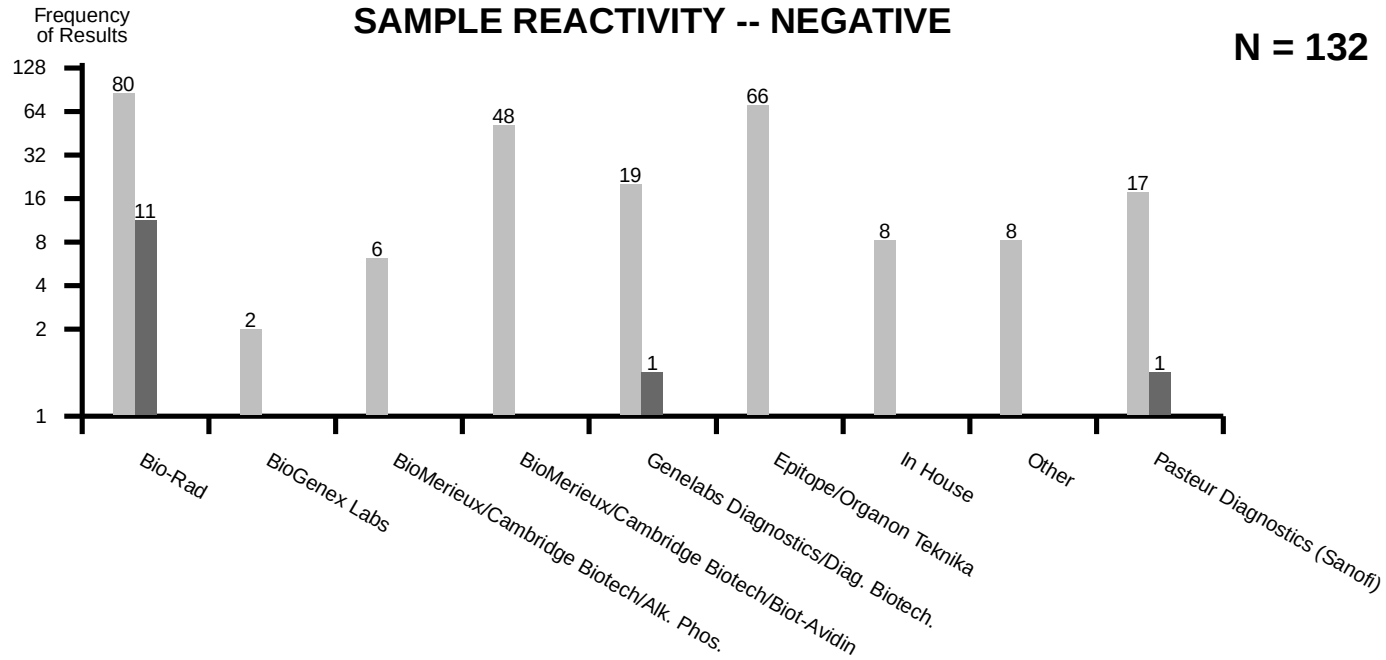


Figure 6. Western blot HIV-1 results, by kit manufacturer, reported by participant laboratories for the August 19, 1996 shipment



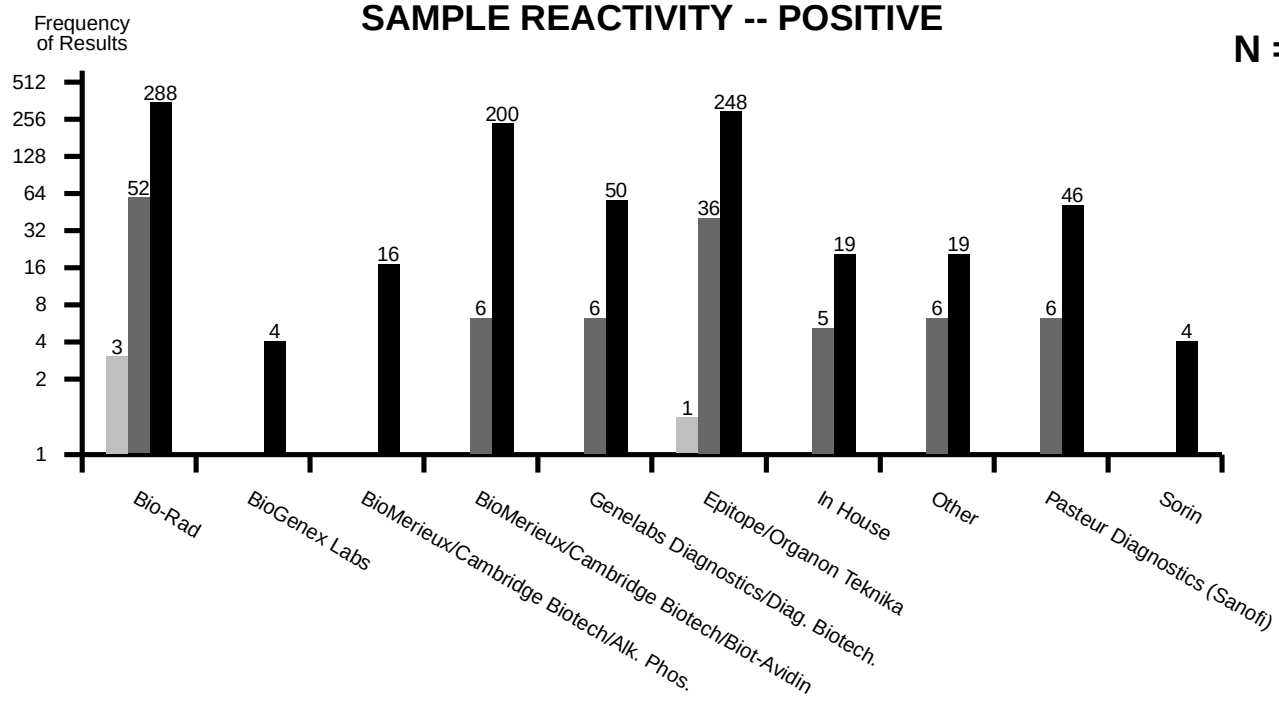
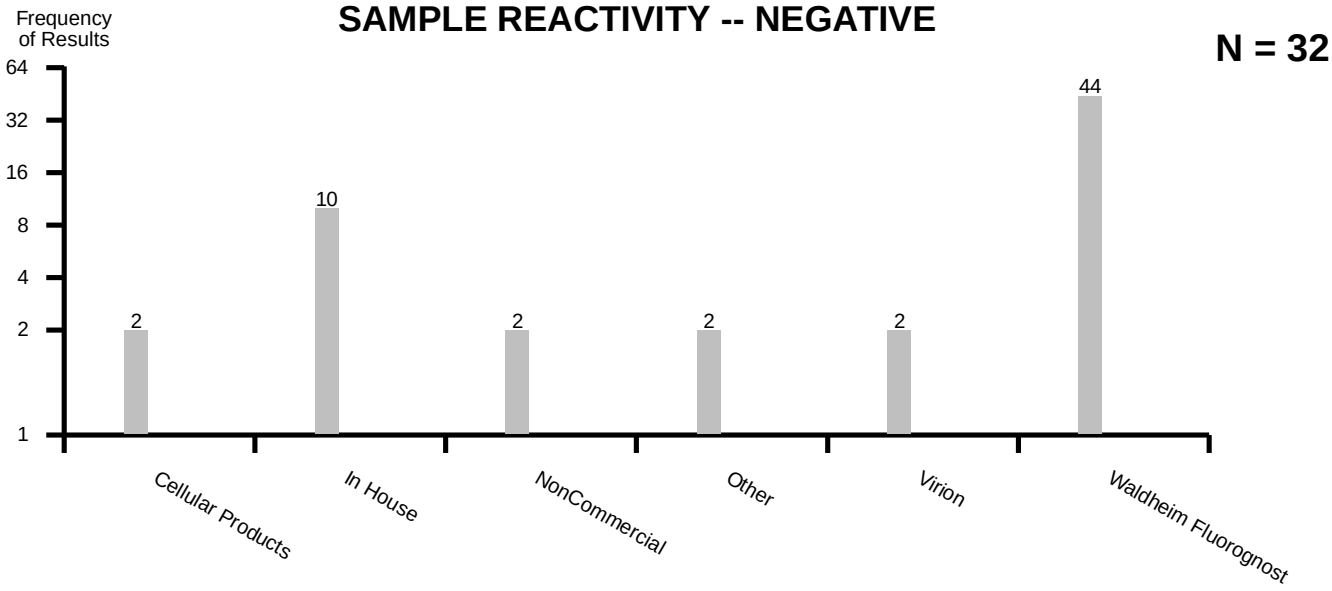
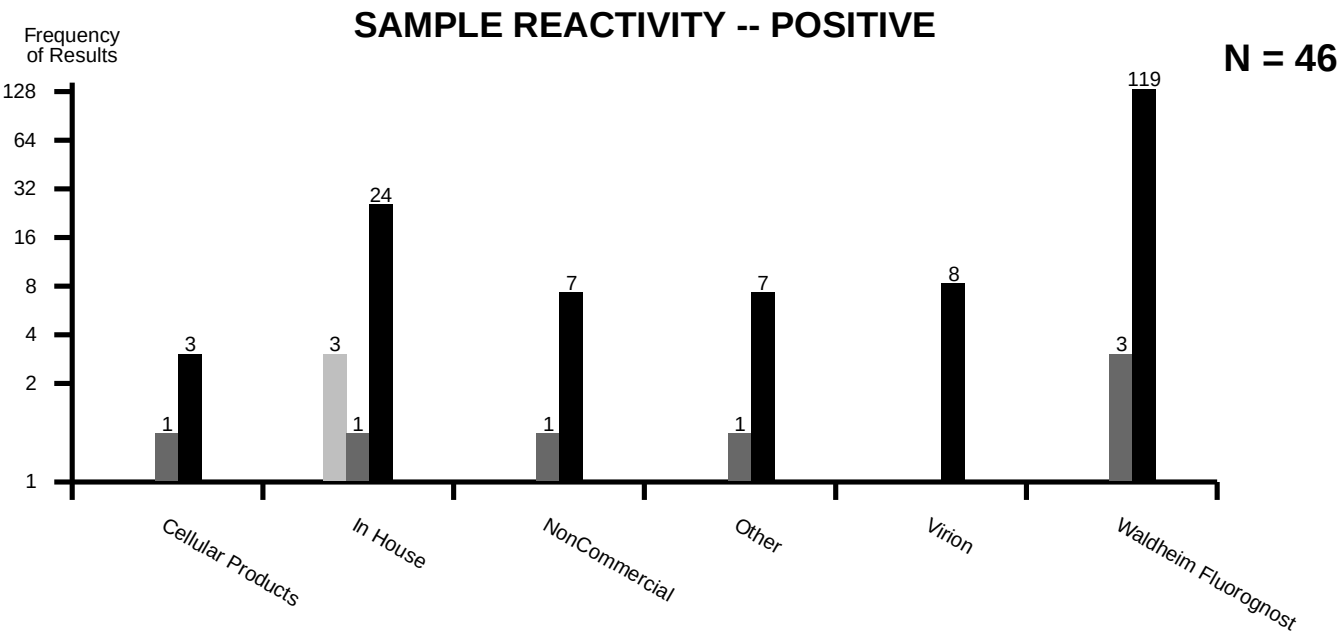


Figure 7. Indirect immunofluorescence HIV-1 results, by kit manufacturer, reported by participant laboratories for the August 19, 1996 shipment





Test Result Interpretations

Non-Reactive Indeterminate Reactive

Figure 8. Western blot HIV-1 band patterns reported to CDC by participant laboratories for the August 19, 1996 shipment

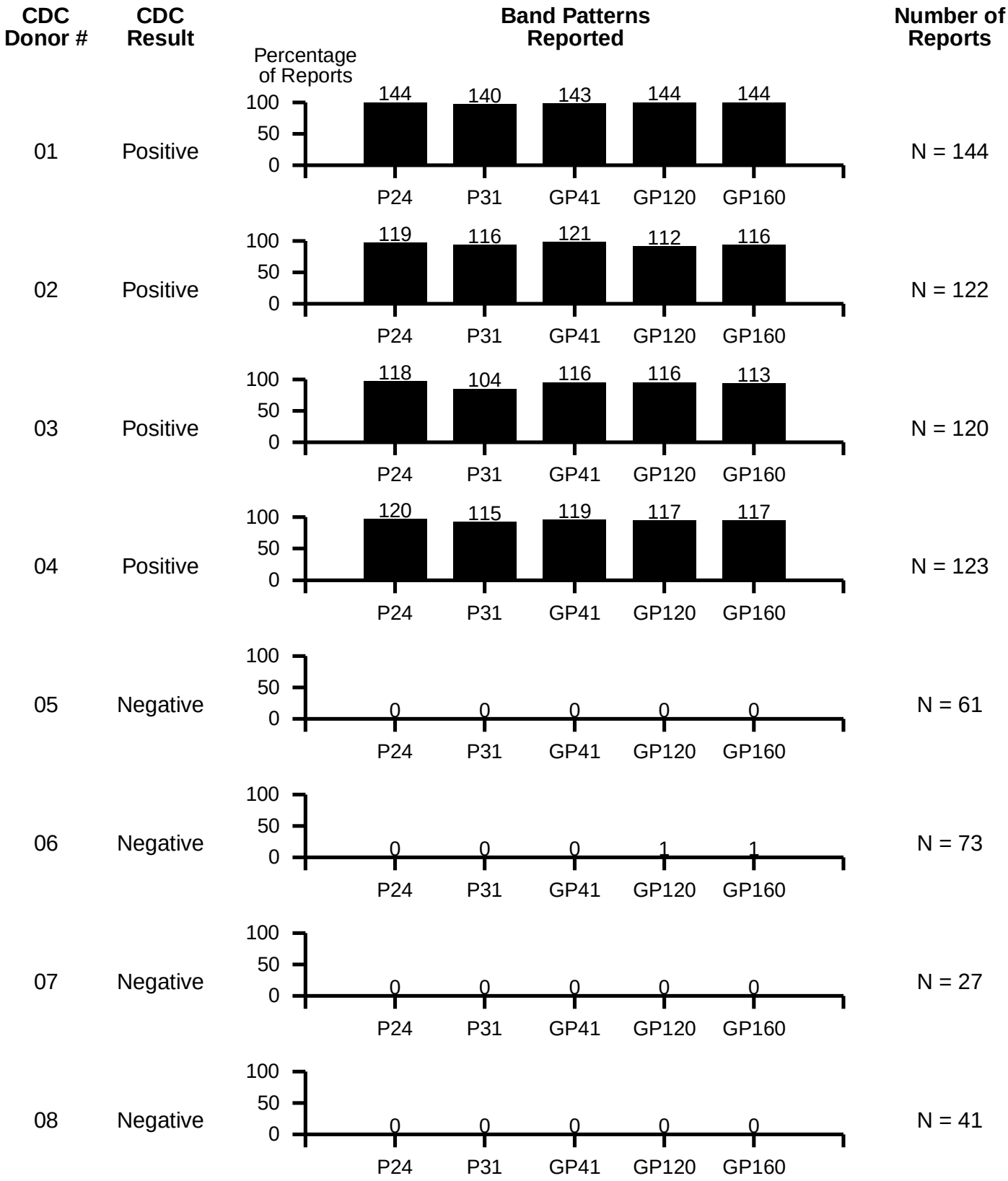


Figure 8. Western blot HIV-1 band patterns reported to CDC by participant laboratories for the August 19, 1996 shipment

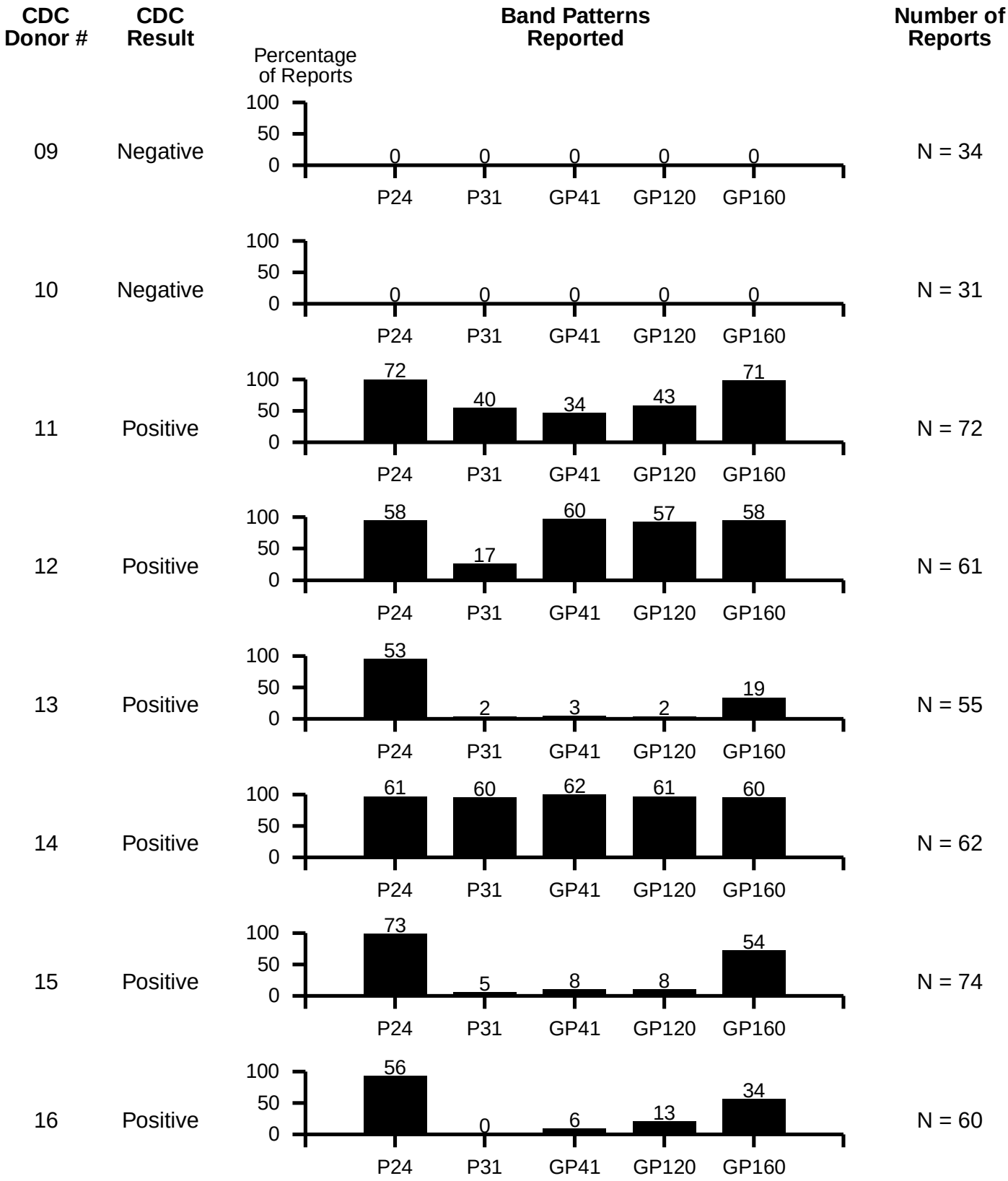


Figure 8. Western blot HIV-1 band patterns reported to CDC by participant laboratories for the August 19, 1996 shipment

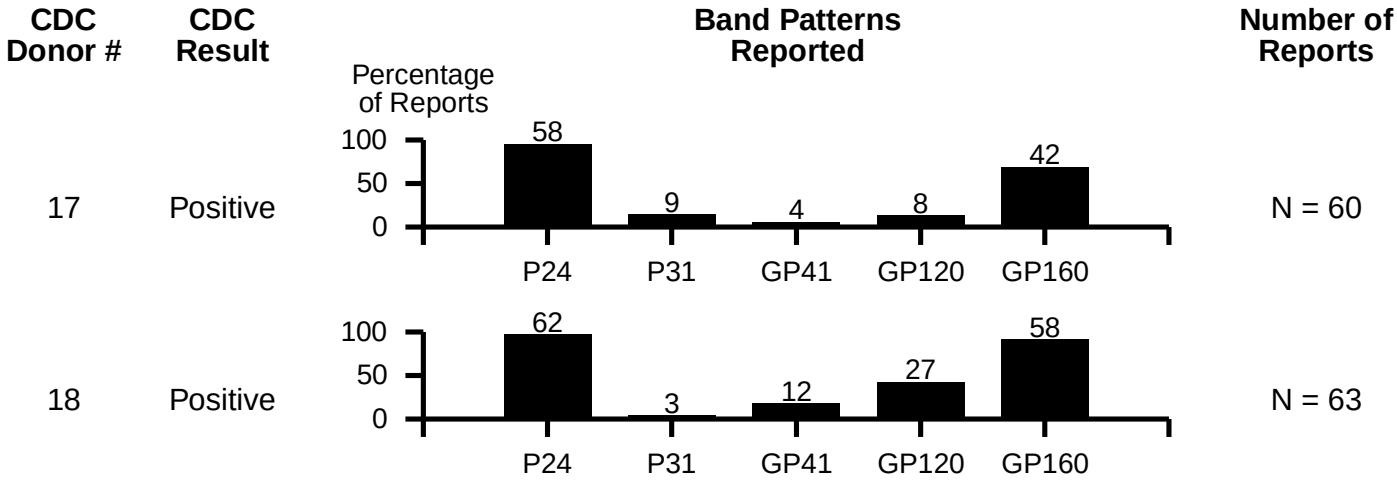


Figure 9. Fluorescence intensity patterns, of HIV-1-infected cells, for IIF results reported to CDC by participant laboratories for the August 19, 1996 shipment

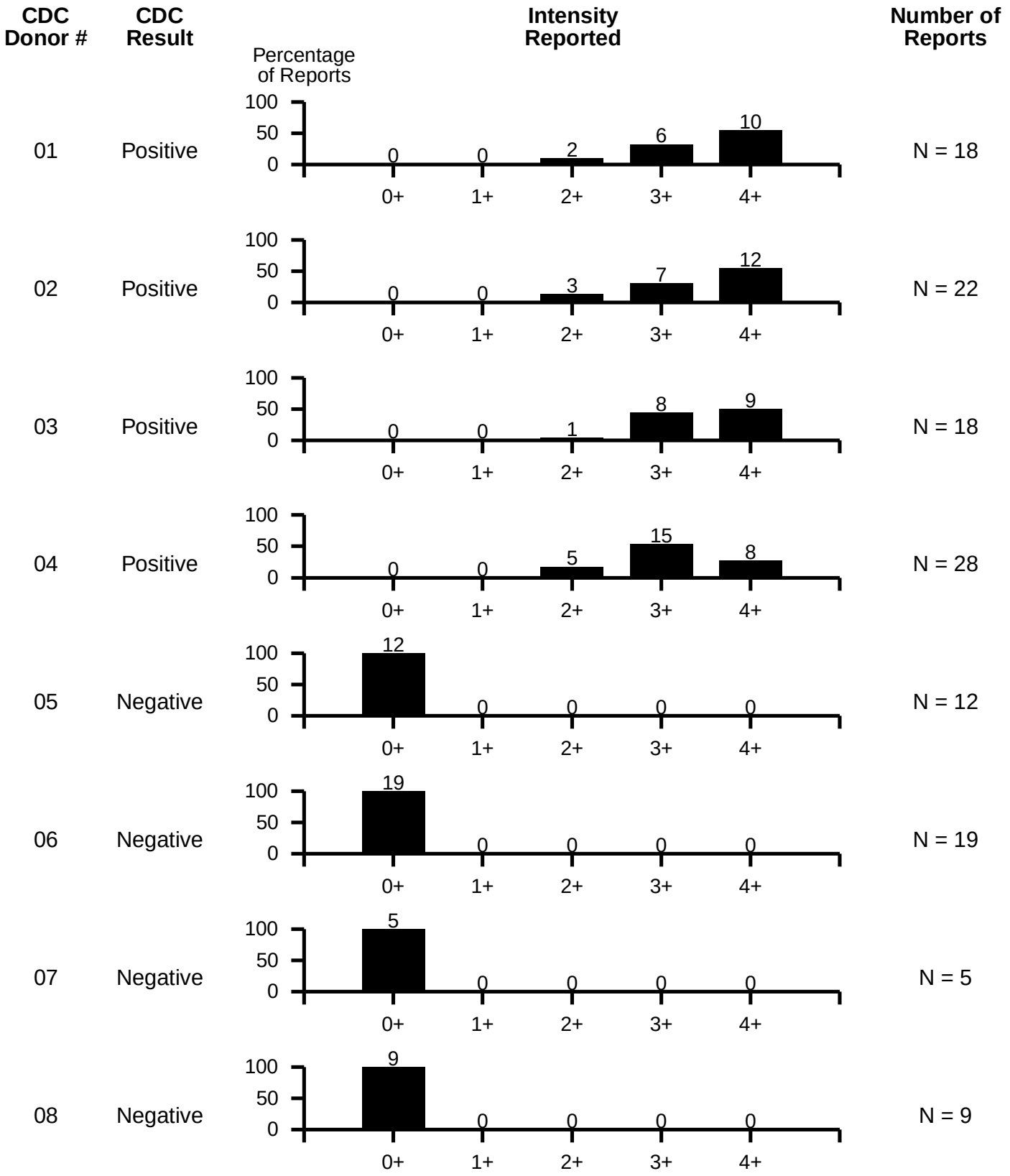


Figure 9. Fluorescence intensity patterns, of HIV-1-infected cells, for IIF results reported to CDC by participant laboratories for the August 19, 1996 shipment

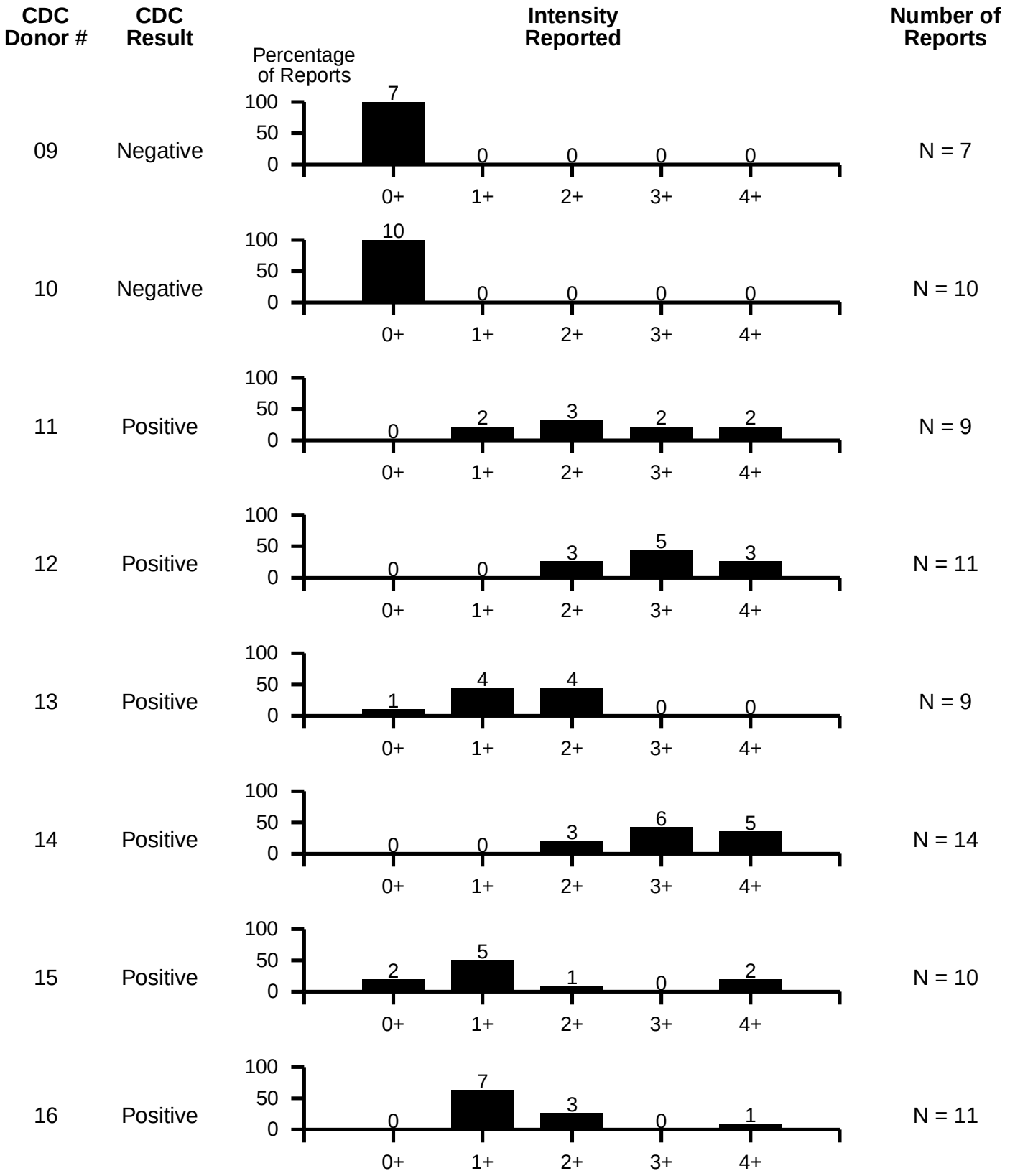


Figure 9. Fluorescence intensity patterns, of HIV-1-infected cells, for IIF results reported to CDC by participant laboratories for the August 19, 1996 shipment

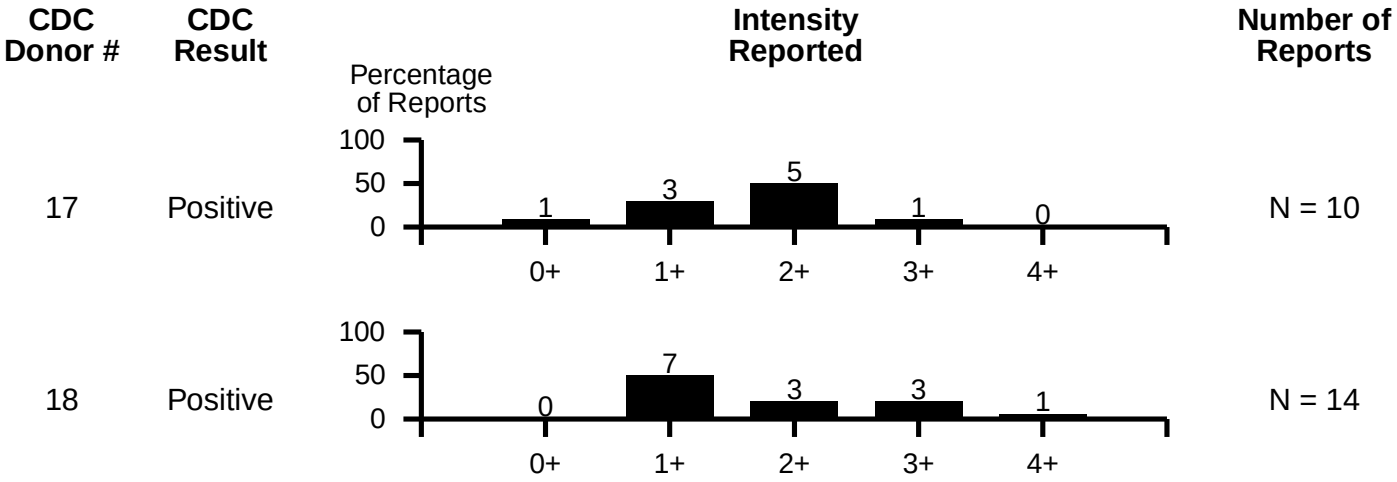


Figure 10. Types of 'Other' HIV test kits used and results reported by participant laboratories to the CDC for the August 19, 1996 shipment