

CERTIFICATE OF ANALYSIS

Page 1 of 4

Product Description: V-PLEX® and V-PLEX Plus Proinflammatory Panel 1 (human) Kit
Kit Catalog Numbers: K15049-Series, K15052-Series, K15053-Series, K15056- Series, K151QR- Series, K151OD- Series
Kit Lot Number: K0081213
Expiration Date: 31 Mar 2021

Acceptance Data/ Percent Recovery Specifications:

| Spot | Name | Calibrator | | Proinflammatory Panel 1 (human) Control 1 | | Proinflammatory Panel 1 (human) Control 2 | | Proinflammatory Panel 1 (human) Control 3 | |
|------|------------------|------------|-------|---|-------|---|-------|---|-------|
| | | Recovery | CV | Recovery | CV | Recovery | CV | Recovery | CV |
| 1 | hu IFN- γ | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 2 | hu IL-1 β | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 3 | hu IL-2 | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 4 | hu IL-4 | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 5 | hu IL-6 | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 6 | hu IL-8 | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 7 | hu IL-10 | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 8 | hu IL-12p70 | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 9 | hu IL-13 | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |
| 10 | hu TNF- α | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% | 80% - 120% | < 20% |

| Spot | Name | LLOQ | | | ULOQ | | |
|------|------------------|-------|------------|-------|-------|------------|-------|
| | | Value | Recovery | CV | Value | Recovery | CV |
| 1 | hu IFN- γ | 1.76 | 80% - 120% | < 20% | 938 | 80% - 120% | < 20% |
| 2 | hu IL-1 β | 0.646 | 80% - 120% | < 20% | 375 | 80% - 120% | < 20% |
| 3 | hu IL-2 | 0.890 | 80% - 120% | < 20% | 938 | 80% - 120% | < 20% |
| 4 | hu IL-4 | 0.218 | 80% - 120% | < 20% | 158 | 80% - 120% | < 20% |
| 5 | hu IL-6 | 0.633 | 80% - 120% | < 20% | 488 | 80% - 120% | < 20% |
| 6 | hu IL-8 | 0.591 | 80% - 120% | < 20% | 375 | 80% - 120% | < 20% |
| 7 | hu IL-10 | 0.298 | 80% - 120% | < 20% | 233 | 80% - 120% | < 20% |
| 8 | hu IL-12p70 | 1.22 | 80% - 120% | < 20% | 315 | 80% - 120% | < 20% |
| 9 | hu IL-13 | 4.21 | 80% - 120% | < 20% | 353 | 80% - 120% | < 20% |
| 10 | hu TNF- α | 0.690 | 80% - 120% | < 20% | 248 | 80% - 120% | < 20% |

Acceptance Data/ Non Specific Binding Specifications:

| Spot | Name | NSB Spec |
|------|------------------|----------|
| 1 | hu IFN- γ | < 1.0% |
| 2 | hu IL-1 β | < 1.0% |
| 3 | hu IL-2 | < 1.0% |
| 4 | hu IL-4 | < 1.0% |
| 5 | hu IL-6 | < 1.0% |
| 6 | hu IL-8 | < 1.0% |
| 7 | hu IL-10 | < 1.0% |
| 8 | hu IL-12p70 | < 1.0% |
| 9 | hu IL-13 | < 1.0% |

CERTIFICATE OF ANALYSIS

Page 2 of 4

| | | |
|----|------------------|--------|
| 10 | hu TNF- α | < 1.0% |
|----|------------------|--------|

Stock Concentration of Material Tested :

| Spot | Name | Item | Conc | Units |
|------|------------------|---|------|-------|
| 1 | hu IFN- γ | Calibrator | 1190 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 544 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 146 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 37.8 | pg/mL |
| 2 | hu IL-1 β | Calibrator | 564 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 218 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 51.8 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 11.9 | pg/mL |
| 3 | hu IL-2 | Calibrator | 1510 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 419 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 39.6 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 3.66 | pg/mL |
| 4 | hu IL-4 | Calibrator | 189 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 109 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 21.8 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 3.4 | pg/mL |
| 5 | hu IL-6 | Calibrator | 767 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 273 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 48.4 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 8.11 | pg/mL |
| 6 | hu IL-8 | Calibrator | 584 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 224 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 33.8 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 6.31 | pg/mL |
| 7 | hu IL-10 | Calibrator | 355 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 136 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 25.3 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 3.81 | pg/mL |
| 8 | hu IL-12p70 | Calibrator | 545 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 195 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 38.3 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 7.56 | pg/mL |
| 9 | hu IL-13 | Calibrator | 518 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 172 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 47.3 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 12.6 | pg/mL |
| 10 | hu TNF- α | Calibrator | 340 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 1 | 92.5 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 2 | 16.5 | pg/mL |
| | | Proinflammatory Panel 1 (human) Control 3 | 2.13 | pg/mL |

Controls tested may not be the same lot as shipped.

CERTIFICATE OF ANALYSIS

Standard Curve Data:

| hu IFN- γ - Spot 1 | | |
|---------------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 1190 | 193,000 | 3.0 |
| 298 | 50,000 | 1.6 |
| 74.4 | 12,400 | 2.1 |
| 18.6 | 3,230 | 2.7 |
| 4.65 | 1,020 | 3.1 |
| 1.16 | 494 | 3.6 |
| 0.291 | 341 | 7.9 |
| 0.00 | 298 | 8.4 |

| hu IL-1 β - Spot 2 | | |
|--------------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 564 | 1,300,000 | 2.7 |
| 141 | 351,000 | 1.7 |
| 35.3 | 87,000 | 2.4 |
| 8.81 | 22,300 | 1.7 |
| 2.20 | 6,020 | 3.2 |
| 0.551 | 1,990 | 2.9 |
| 0.138 | 948 | 3.2 |
| 0.00 | 647 | 6.2 |

| hu IL-2 - Spot 3 | | |
|------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 1510 | 1,340,000 | 4.1 |
| 378 | 369,000 | 2.4 |
| 94.4 | 98,200 | 2.7 |
| 23.6 | 24,900 | 1.6 |
| 5.90 | 6,800 | 3.8 |
| 1.47 | 1,940 | 2.7 |
| 0.369 | 807 | 3.2 |
| 0.00 | 414 | 5.3 |

| hu IL-4 - Spot 4 | | |
|------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 189 | 847,000 | 2.8 |
| 47.3 | 246,000 | 2.7 |
| 11.8 | 65,600 | 2.3 |
| 2.95 | 16,600 | 4.7 |
| 0.738 | 4,160 | 1.6 |
| 0.185 | 1,180 | 4.0 |
| 0.0461 | 410 | 4.7 |
| 0.00 | 155 | 8.5 |

| hu IL-6 - Spot 5 | | |
|------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 767 | 1,450,000 | 2.2 |
| 192 | 340,000 | 1.6 |
| 47.9 | 72,600 | 2.1 |
| 12.0 | 17,000 | 3.4 |
| 3.00 | 4,330 | 1.8 |
| 0.749 | 1,200 | 2.4 |
| 0.187 | 425 | 2.5 |
| 0.00 | 183 | 9.0 |

| hu IL-8 - Spot 6 | | |
|------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 584 | 909,000 | 2.7 |
| 146 | 229,000 | 2.3 |
| 36.5 | 55,300 | 1.9 |
| 9.13 | 14,000 | 1.2 |
| 2.28 | 3,800 | 2.2 |
| 0.570 | 1,120 | 2.0 |
| 0.143 | 476 | 3.2 |
| 0.00 | 262 | 6.6 |

| hu IL-10 - Spot 7 | | |
|-------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 355 | 766,000 | 1.9 |
| 88.8 | 221,000 | 1.7 |
| 22.2 | 57,700 | 1.5 |
| 5.55 | 14,500 | 2.0 |
| 1.39 | 3,900 | 2.3 |
| 0.347 | 1,190 | 2.5 |
| 0.0867 | 519 | 5.7 |
| 0.00 | 308 | 8.1 |

| hu IL-12p70 - Spot 8 | | |
|----------------------|------------|------|
| Conc. pg/mL | ECL Signal | %CV |
| 545 | 473,000 | 1.6 |
| 136 | 142,000 | 2.0 |
| 34.1 | 37,000 | 1.9 |
| 8.52 | 9,610 | 2.3 |
| 2.13 | 2,620 | 2.6 |
| 0.532 | 894 | 4.1 |
| 0.133 | 452 | 8.9 |
| 0.00 | 316 | 19.0 |

| hu IL-13 - Spot 9 | | |
|-------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 518 | 1,330,000 | 1.9 |
| 130 | 236,000 | 2.1 |
| 32.4 | 30,900 | 2.6 |
| 8.09 | 4,830 | 2.7 |
| 2.02 | 1,240 | 2.3 |
| 0.506 | 436 | 3.5 |
| 0.126 | 253 | 9.0 |
| 0.00 | 191 | 6.2 |

CERTIFICATE OF ANALYSIS

| hu TNF- α - Spot 10 | | |
|----------------------------|------------|-----|
| Conc. pg/mL | ECL Signal | %CV |
| 340 | 341,000 | 2.9 |
| 85.0 | 83,000 | 2.2 |
| 21.3 | 20,800 | 2.7 |
| 5.31 | 5,140 | 2.2 |
| 1.33 | 1,570 | 3.0 |
| 0.332 | 613 | 4.1 |
| 0.0830 | 363 | 6.9 |
| 0.00 | 286 | 9.8 |


Components:

| Description | Lot Number | Storage Temperature | Expiration Date |
|--|------------------|--------------------------|-----------------|
| Proinflammatory Panel 1 (human) Plate | Z0047052 | 2-8°C | 31 Aug 2021 |
| Anti-hu IFN- γ Antibody | D0081132 | 2-8°C | 28 Feb 2022 |
| Anti-hu IL-1 β Antibody | D0081182 | 2-8°C | 30 Apr 2022 |
| Anti-hu IL-2 Antibody | D0081167 | 2-8°C | 28 Feb 2022 |
| Anti-hu IL-4 Antibody | D0081183 | 2-8°C | 30 Jun 2022 |
| Anti-hu IL-6 Antibody | D0081160 | 2-8°C | 30 Apr 2022 |
| Anti-hu IL-8 Antibody | D0081168 | 2-8°C | 30 Apr 2022 |
| Anti-hu IL-10 Antibody | D0081134 | 2-8°C | 31 Mar 2022 |
| Anti-hu IL-12p70 Antibody | D0081161 | 2-8°C | 31 Mar 2022 |
| Anti-hu IL-13 Antibody | D0081169 | 2-8°C | 30 Apr 2022 |
| Anti-hu TNF- α Antibody | D0081228 | 2-8°C | 31 May 2022 |
| Proinflammatory Panel 1 (human) Calibrator Blend | A0080205 | 2-8°C | 31 Mar 2024 |
| Diluent 2 | M0020103 | $\leq -10^\circ\text{C}$ | 31 Mar 2021 |
| Diluent 3 | M0030087 | $\leq -10^\circ\text{C}$ | 30 Jun 2021 |
| MSD Read Buffer T | Not Kit Specific | Not Kit Specific | N/A |

| Additional Components Included in V-PLEX Plus | |
|---|------------------|
| Plate Seals | Not Kit Specific |
| Wash Buffer (20X), 100 mL | Not Kit Specific |
| Proinflammatory Panel 1 (human) Control 1 | Not Kit Specific |
| Proinflammatory Panel 1 (human) Control 2 | Not Kit Specific |
| Proinflammatory Panel 1 (human) Control 3 | Not Kit Specific |

Statement:

The above product is intended for Research Use Only. Not for use in Diagnostic Procedures.

| | Name | Function | Signature | Date |
|-----------------|--------------|----------|--|-------------|
| Review/Approval | Dawn Stollar | Quality |  | 22 MAY 2019 |