



www.mesoscale.com

Ordering Information

MSD Customer Service
Phone: 1-240-314-2795
Fax: 1-301-990-2776
Email: CustomerService@mesoscale.com

Scientific Support

Phone: 1-240-314-2798
Email: ScientificSupport@mesoscale.com

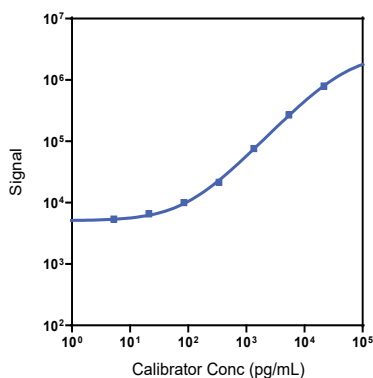
Company Address

Meso Scale Discovery
A division of
Meso Scale Diagnostics, LLC.
1601 Research Boulevard
Rockville, MD 20850-3173 USA

| Product Options | Catalog Number | Description |
|-----------------|--|---|
| Multiplex | K15068M, K25068M | U-PLEX Biomarker Group 1 (NHP) |
| Singleplex | K156W GK-1/-2/-4 | U-PLEX NHP IL-23 Assay with SECTOR™ plates |
| | K156W GK-21/-22/-24 | U-PLEX NHP IL-23 Assay with QuickPlex Ultra™ plates |
| | K256W GK-2/-4 | U-PLEX NHP IL-23 Assay with 384-well plates |
| Antibody Set | B21WG-2/-3 | U-PLEX Human IL-23 Antibody Set |
| Assay Protocol | U-PLEX Product Inserts are available at www.mesoscale.com | |

The MESO SCALE DISCOVERY® U-PLEX platform was designed to provide ultimate flexibility for detection of biomarkers in a wide variety of sample types. This datasheet provides the representative performance of the U-PLEX® NHP IL-23 Assay tested on U-PLEX 96-well SECTOR plates run as a multiplex. The data do not represent the product specifications. Under your experimental conditions, the assay may perform differently from the representative data. U-PLEX assays are offered in either singleplex or multiplex; both are available in 96- or 384-well plates. See a U-PLEX product insert for instrument compatibility.

Representative Calibration Curve and Sensitivity



| Assay | Median LLOD (pg/mL) | LLOD Range (pg/mL) |
|-------|---------------------|--------------------|
| IL-23 | 1.4 | 0.99-2.0 |

The Calibrator curve was fitted with a 4-parameter logistic model with a $1/Y^2$ weighting. The lower limit of detection (LLOD) is a calculated concentration corresponding to 2.5X the standard deviations above the background (zero Calibrator).

Precision

| | Control | Average Conc. (pg/mL) | Average Intra-run Conc. %CV | Inter-run Conc. %CV |
|-------|---------|-----------------------|-----------------------------|---------------------|
| IL-23 | High | 2,870 | 1.3 | 8.5 |
| | Mid | 397 | 4.1 | 17.6 |
| | Low | 45 | 13.4 | 30.9 |

Controls were made by spiking Calibrator into assay diluent at 3 levels within the quantitative range of the assay. Average intra-run concentration %CV is the average %CV of the control replicates within an individual run. Inter-run concentration %CV is the variability of controls across multiple runs.

For Research Use Only.
Not for use in diagnostic procedures.

Spike Recovery

| | Spike Level | Serum (N=5) | | Plasma (N=5) | | Cell Culture Media (N=5) | |
|-------------------|-------------|--------------------|------------------|--------------------|------------------|--------------------------|------------------|
| | | Average % Recovery | % Recovery Range | Average % Recovery | % Recovery Range | Average % Recovery | % Recovery Range |
| Cynomolgus Monkey | High | 90 | 79-96 | 98 | 88-105 | 129 | 122-137 |
| | Mid | 81 | 67-90 | 86 | 76-91 | 125 | 120-131 |
| | Low | 59 | 41-75 | 70 | 62-79 | 127 | 123-131 |
| Rhesus Monkey | High | 87 | 74-97 | 86 | 66-96 | 129 | 122-137 |
| | Mid | 84 | 70-94 | 83 | 65-94 | 125 | 120-131 |
| | Low | 83 | 69-94 | 79 | 55-93 | 127 | 123-131 |

Normal serum, EDTA plasma, and cell culture media were spiked with Calibrator at 3 levels. Undiluted samples were tested to determine the expected concentration of the analyte. Samples may benefit from additional dilution with assay diluent to reduce matrix effects.

$$\% \text{ Recovery} = (\text{measured concentration} / \text{expected concentration}) \times 100$$

Tested Samples

| | Sample Type | Serum (N=11) | Plasma (N=11) | Cell Culture Media (N=10) |
|-------------------|----------------|--------------|---------------|---------------------------|
| Cynomolgus Monkey | Median (pg/mL) | NA | ND | 17 |
| | Range (pg/mL) | NA | ND-17 | 11-40 |
| | % Detected | 0 | 18 | 100 |
| Rhesus Monkey | Median (pg/mL) | 2.2 | ND | 49 |
| | Range (pg/mL) | ND-24 | ND-6.6 | ND-204 |
| | % Detected | 45 | 9.1 | 90 |

Normal serum, EDTA plasma, and cell culture media were diluted 2-fold prior to the assay. ND = not detectable (<LLOD); NA = not applicable due to 0% detected

Dilution Linearity

| | Fold Dilution | Serum (N=5) | | Fold Dilution | Plasma (N=5) | | Fold Dilution | Cell Culture Media (N=4) | |
|-------------------|---------------|--------------------|------------------|---------------|--------------------|------------------|---------------|--------------------------|------------------|
| | | Average % Recovery | % Recovery Range | | Average % Recovery | % Recovery Range | | Average % Recovery | % Recovery Range |
| Cynomolgus Monkey | 2 | 105 | 101-110 | 2 | 103 | 98-108 | 2 | 96 | 96-98 |
| | 4 | 110 | 104-118 | 4 | 107 | 102-112 | 4 | 90 | 89-92 |
| | 8 | 105 | 93-124 | 8 | 100 | 91-115 | 8 | 86 | 82-91 |
| Rhesus Monkey | 2 | 105 | 89-113 | 2 | 121 | 111-135 | 2 | 96 | 96-98 |
| | 4 | 97 | 82-103 | 4 | 123 | 114-133 | 4 | 90 | 89-92 |
| | 8 | 96 | 85-100 | 8 | 124 | 108-137 | 8 | 86 | 82-91 |

Normal serum, EDTA plasma, and cell culture media were spiked with Calibrator and tested at different dilutions. Undiluted samples were tested to determine the expected concentration of the analyte. Samples may benefit from additional dilution with assay diluent to reduce matrix effects.

$$\% \text{ Recovery} = (\text{measured concentration} / \text{expected concentration}) \times 100$$

MSD U-PLEX NHP IL-23

Specificity

To assess specificity, the IL-23 Antibody Set was tested individually against a larger panel of recombinant human analytes for nonspecific binding (CTACK, Eotaxin, Eotaxin-2, Eotaxin-3, ENA-78, FLT3L, Fractalkine, G-CSF, GM-CSF, GRO- α , I-309, IFN- α 2a, IFN- γ , IL-1 α , IL-1 β , IL-1RA, IL-2, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-12/IL-23p40, IL-12p70, IL-13, IL-15, IL-16, IL-17A, IL-17AF, IL-17B, IL-17C, IL-17D, IL-17F, IL-18, IL-22, IL-23, IP-10, I-TAC, MCP-1, MCP-2, MCP-3, MCP-4, M-CSF, MDC, MIF, MIP-1 α , MIP-1 β , MIP-3 α , MIP-3 β , MIP-5, SDF-1 α , TARC, TNF- α , TNF- β , TPO, TRAIL, VEGF-A, and YKL-40). Nonspecific binding was less than 0.5%.

IFN- α 2a detection antibody interacts with IL-23 capture antibody resulting in elevated background.

$$\% \text{ Nonspecificity} = (\text{nonspecific signal} / \text{specific signal}) \times 100$$

Diluent Compatibility

Diluents 57 and 3 are provided with this assay. MSD offers a range of assay and antibody diluents for separate purchase. Depending on your assay needs, other diluents may be tested.

Assay Components

Calibrator: IL-23 is included in Calibrator 6. The Calibrator is a recombinant hetero-dimer comprised of p40 (23-328) covalently linked to p19 (20-189) that is expressed in an insect cell line.

Antibodies: The U-PLEX NHP IL-23 Assay uses a mouse monoclonal antibody for capture and a mouse monoclonal antibody for detection.

Assay generation: A

Note: This datasheet contains representative assay performance data. In custom multiplex formats, the assay may perform differently than the representative data shown.

