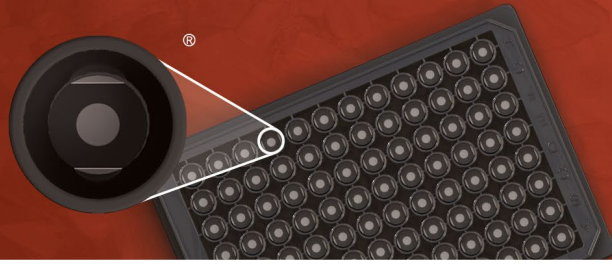
# U-PLEX®

# NHP SDF-1α



www.mesoscale.com®

## Ordering Information

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## Company Address

Meso Scale Discovery
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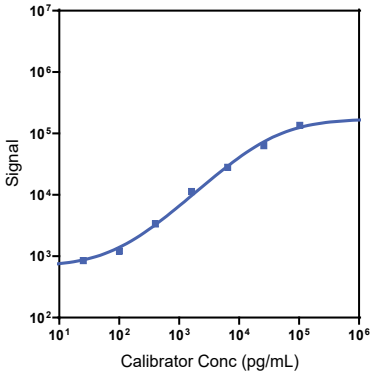
| Product Options | Catalog Number | Description |
|---|---|---|
| Multiplex | K15068M, K25068M | U-PLEX Biomarker Group 1 (NHP) |
| Singleplex | K156VBK-1/-2/-4 | U-PLEX NHP SDF-1α Assay with SECTOR™ plates |
| | K156VBK-21/-22/-24 | U-PLEX NHP SDF-1α Assay with QuickPlex Ultra™ plates |
| | K256VBK-2/-4 | U-PLEX NHP SDF-1α Assay with 384-well plates |
| Antibody Set | B26VB-2/-3 | U-PLEX NHP SDF-1α 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 SDF-1α 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) |
|---|---|---|
| SDF-1α | 18 | 9.9-35 |

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 |
|---|---|---|---|---|
| SDF-1α | High | NA | NA | NA |
| | Mid | 48,700 | 4.7 | 15.4 |
| | Low | 5,601 | 2.8 | 12.6 |

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. NA = not available

## Spike Recovery

| | | Serum (N=5) | | Plasma (N=5) | | Cell Culture Media (N=5) | |
|---|---|---|---|---|---|---|---|
| | Spike Level | Average % Recovery | % Recovery Range | Average % Recovery | % Recovery Range | Average % Recovery | % Recovery Range |
| Cynomolgus Monkey | High | 75 | 65-87 | 59 | 54-65 | 89 | 80-99 |
| | Mid | 82 | 72-95 | 68 | 61-72 | 91 | 85-96 |
| | Low | 91 | 83-100 | 80 | 77-83 | 99 | 90-104 |
| Rhesus Monkey | High | 60 | 28-77 | 90 | 86-95 | — | — |
| | Mid | 69 | 30-90 | 92 | 85-103 | — | — |
| | Low | 89 | 43-124 | 98 | 91-107 | — | — |

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. dash (—) = not available

*% Recovery = (measured concentration / expected concentration) x 100*

## Tested Samples

| | Sample Type | Serum (N=8) | Plasma (N=8) | Cell Culture Media (N=8) |
|---|---|---|---|---|
| Cynomolgus Monkey | Median (pg/mL) | 1,150 | 721 | 16 |
| | Range (pg/mL) | 706-1,820 | 621-1,090 | 9.7-26 |
| | % Detected | 100 | 100 | 100 |
| Rhesus Monkey | Median (pg/mL) | 449 | 975 | 15 |
| | Range (pg/mL) | 226-1,460 | 827-1,050 | 9.1-27 |
| | % Detected | 100 | 100 | 100 |

Normal serum, EDTA plasma, and cell culture media were diluted 2-fold prior to the assay.

## Dilution Linearity

| | Serum (N=4) | | | Plasma (N=4) | | | Cell Culture Media (N=4) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Fold Dilution | Average % Recovery | % Recovery Range | Fold Dilution | Average % Recovery | % Recovery Range | Fold Dilution | Average % Recovery | % Recovery Range |
| Cynomolgus Monkey | 2 | 120 | 99-134 | 2 | 121 | 109-139 | 2 | 115 | 106-117 |
| | 4 | 169 | 133-183 | 4 | 178 | 171-187 | 4 | 126 | 106-125 |
| | 8 | 199 | 143-235 | 8 | 206 | 193-223 | 8 | 135 | 105-125 |
| Rhesus Monkey | 2 | 151 | 118-224 | 2 | 118 | 113-125 | 2 | — | — |
| | 4 | 213 | 144-359 | 4 | 141 | 135-145 | 4 | — | — |
| | 8 | 251 | 165-445 | 8 | 163 | 157-169 | 8 | — | — |

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. dash (—) = not available

*% Recovery = (measured concentration / expected concentration) x 100*

## Specificity

To assess specificity, the SDF-1α 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-α2a, IFN-γ, IL-1α, IL-1β, 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-17A/F, 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-1α, MIP-1β, MIP-3α, MIP-3β, MIP-5, SDF-1α, TARC, TNF-α, TNF-β, TPO, TRAIL, VEGF-A, and YKL-40). Nonspecific binding was less than 0.5%.

*% Nonspecificity = (nonspecific signal / specific signal) x 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:** SDF-1α is included in Calibrator 4. The full-length recombinant protein is expressed in *E. coli*.
**Antibodies:** The U-PLEX NHP SDF-1α Assay uses a goat polyclonal antibody for capture and a goat polyclonal 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.