

[www.mesoscale.com](http://www.mesoscale.com)<sup>®</sup>

## Ordering Information

MSD Customer Service  
 Phone: 1-301-947-2025  
 : 1-301-990-2776  
 Email: [CustomerService@mesoscale.com](mailto:CustomerService@mesoscale.com)

## Scientific Support

Phone: 1-301-947-2025  
 Email: [ScientificSupport@mesoscale.com](mailto:ScientificSupport@mesoscale.com)

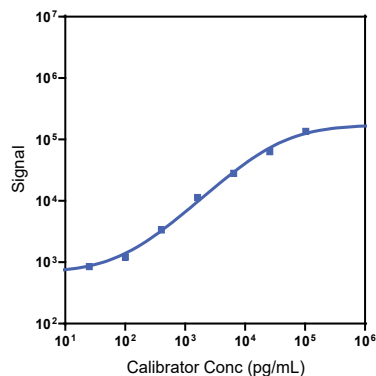
## Company Address

MESO SCALE DISCOVERY<sup>®</sup>  
 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)
	K156VBK-1/-2/-4	U-PLEX NHP SDF-1 $\alpha$ Assay with SECTOR <sup>™</sup> plates
	K156VBK-21/-22/-24	U-PLEX NHP SDF-1 $\alpha$ Assay with QuickPlex <sup>®</sup> plates
Singleplex	K256VBK-2/-4	U-PLEX NHP SDF-1 $\alpha$ Assay with 384-well plates
Antibody Set	B26VB-2/-3	U-PLEX NHP SDF-1 $\alpha$ Antibody Set
Assay Protocol	U-PLEX Product Inserts are available at <a href="http://www.mesoscale.com">www.mesoscale.com</a>	

The U-PLEX<sup>®</sup> 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-1 $\alpha$  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-1 $\alpha$	18	9.9-35

The Calibrator curve was fitted with a 4-parameter logistic model with a 1/Y<sup>2</sup> 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-1 $\alpha$	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

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	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 tested without dilution prior to the assay.

## Dilution Linearity

	Fold Dilution	Serum (N=4)		Plasma (N=4)			Cell Culture Media (N=4)		
		Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	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

# MSD U-PLEX NHP SDF-1 $\alpha$

## Specificity

To assess specificity, the SDF-1 $\alpha$  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- $\alpha$ , I-309, IFN- $\alpha$ 2a, IFN- $\gamma$ , IL-1 $\alpha$ , IL-1 $\beta$ , 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-1 $\alpha$ , MIP-1 $\beta$ , MIP-3 $\alpha$ , MIP-3 $\beta$ , MIP-5, SDF-1 $\alpha$ , TARC, TNF- $\alpha$ , TNF- $\beta$ , 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-1 $\alpha$  is included in Calibrator 4. The full-length recombinant protein is expressed in *E. coli*.

**Antibodies:** The U-PLEX NHP SDF-1 $\alpha$  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.

