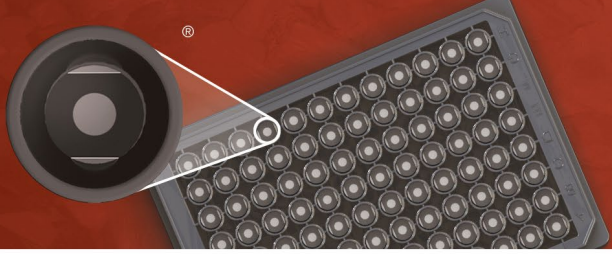


# Human SDF-1 $\alpha$



www.mesoscale.com<sup>®</sup>

### Ordering Information

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

### Scientific Support

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

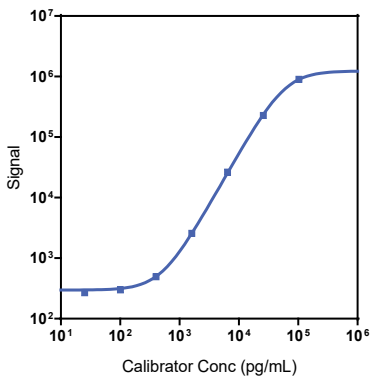
### Company Address

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	K15067M, K25067M	U-PLEX Biomarker Group 1 (human)
	K151ACM, K251ACM	U-PLEX Metabolic Group 1 (human)
Singleplex	K151VBK-1/-2/-4	U-PLEX Human SDF-1 $\alpha$ Assay with SECTOR <sup>™</sup> plates
	K151VBK-21/-22/-24	U-PLEX Human SDF-1 $\alpha$ Assay with QuickPlex <sup>®</sup> plates
	K251VBK-2/-4	U-PLEX Human SDF-1 $\alpha$ Assay with 384-well plates
Antibody Set	B21VB-2/-3	U-PLEX Human SDF-1 $\alpha$ Antibody Set
Protocol	U-PLEX Product Inserts are available at <a href="http://www.mesoscale.com">http://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 Human 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 on 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 $\alpha$	278	166-383

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 2.5 standard deviations above the background (zero Calibrator).

### Precision

Control	Average Conc. (pg/mL)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	36,300	5.2	8.3
Mid	21,000	3.8	9.0
Low	4,180	7.5	13.9

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.

# MSD® U-PLEX Human SDF-1 $\alpha$

## Tested Samples

Sample Type	Serum (N=10)	Plasma (N=10)	Spiked Plasma (N=5)	Spiked Serum (N=5)
Median (pg/mL)	ND	ND	2,850	3,100
Range (pg/mL)	ND-616	ND-476	773-3,100	1,180-3,720
% Detected	40	30	100	100

Normal serum and plasma samples were diluted 2-fold prior to the assay. ND = non-detectable (<LLOD)

## Dilution Linearity

Serum			EDTA Plasma		
Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
2	119	109-133	2	109	99-116
4	123	111-139	4	111	98-127
8	124	108-149	8	108	95-124

Normal human serum and EDTA plasma 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.

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

## Spike Recovery

Spike Level	Serum		EDTA Plasma	
	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
High	87	75-106	105	85-123
Mid	89	80-108	105	90-118
Low	83	77-94	93	87-98

Normal serum and plasma 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.

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

## Specificity

To assess specificity, the SDF-1 $\alpha$  Antibody Set was tested individually against a larger panel of analytes for nonspecific binding: APRIL/TNFSF13, BAFF R/TNFRSF13C, BCMA/TNFRSF17, CD20, CD27, CD276/B7-H3, CD28, CD40L (soluble), CTACK, CTLA-4, ENA-78, Eotaxin, Eotaxin-2, Eotaxin-3, EPO, E-Selectin, FGF (basic), FLT3L, Fractalkine, G-CSF, Galectin-9, GPCR/TNFRSF18, GITR/TNFRSF18, GM-CSF, gp130 (soluble), Granzyme A, Granzyme B, GRO- $\alpha$ , ~~HAVCR2/TIM3~~, HVEM/TNFRSF14, I-309, ICOS, ICOSL/B7-H2, IFN- $\alpha$ 2a, ~~IFN $\beta$~~ , ~~IFN $\gamma$~~ , IL1 $\alpha$ , IL1 $\beta$ , IL1RA, IL-10, IL-12/IL-23p40, IL-12p70, IL-13, IL-15, IL-16, IL-17A, IL-17A/F, IL 17C, IL-17D, IL-17E/IL 25, IL-17F, IL-18, IL-2, IL-21, IL-22, IL 23, IL-27, IL-29/IFN- $\lambda$ 1, IL2R $\alpha$ , IL3, IL-31, IL-33, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IP-10, I-TAC, LAG 3, LIGHT/TNFSF14, MCP-1, MCP-2, MCP-4, M CSF, MDC, MIF, MIG, MIP-1 $\alpha$ , ~~MIP5~~, MMP-1, MMP-2, MMP-7, MMP-9, Nectin-4, OX40/TNFRSF4, PD1, PD-L1, PD-L2, Pentraxin 3, Perforin, PIGF, P Selectin, RAGE (soluble), RANKL/TNFSF11, RANTES, S100A12, SDF-1 $\alpha$ , ~~TARC~~, ~~Tie2~~, TIGIT, TLR-1, TNF-RI, TNF-RII, TNF- $\alpha$ , ~~TNF $\beta$~~  ~~TPO~~, ~~TRAIL~~, ~~TSLP~~, ~~VEGFA~~, ~~VEGF-D~~, ~~VEGFR-1/Fit-1~~ and ~~YKL-40~~). Nonspecific binding was less than 2.0%.

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

## 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:** SDF-1 $\alpha$  is included in Calibrator 4. The SDF-1 $\alpha$  Calibrator is a full-length recombinant protein expressed in *E. coli*.

**Antibodies:** The U-PLEX Human SDF-1 $\alpha$  Assay uses a mouse monoclonal 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 from the representative data shown.

