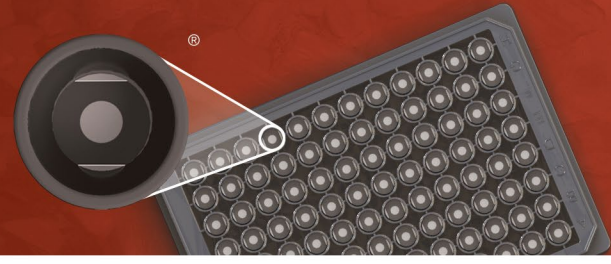


Human MMP-9 (total)



www.mesoscale.com®

Ordering Information

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

Scientific Support

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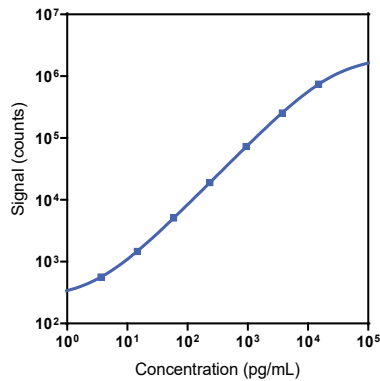
Company Address

MESO SCALE DISCOVERY®
 A division of
 Meso Scale Diagnostics, LLC.
 1601 Research Boulevard
 Rockville, MD 20850-3173 USA

Product Options	Catalog Number	Description
Multiplex	K151AEM, K251AEM	U-PLEX Immuno-Oncology Group 1 (human)
Singleplex	K151AHMK-1/-2/-4	U-PLEX Human MMP-9 (total) Assay with SECTOR™ plates
	K151AHMK-21/-22/-24	U-PLEX Human MMP-9 (total) Assay with QuickPlex® plates
	K251AHMK-2/-4	U-PLEX Human MMP-9 (total) Assay with 384-well plates
Antibody Set	B21AHM-2/-3	U-PLEX Human MMP-9 (total) Antibody Set
Protocol	U-PLEX Product Inserts are available at www.mesoscale.com .	

The U-PLEX® platform was designed to provide ultimate flexibility for the detection of biomarkers in a wide variety of sample types. This datasheet provides the representative performance of the U-PLEX Human MMP-9 (total) 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)
MMP-9 (total)	0.88	0.70–1.12

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 2.5 standard deviations above the background (zero Calibrator).

Precision

Control	Average Conc. (pg/mL)	Average Intra-run Conc. (%CV)	Inter-run Conc. (%CV)
High	2,670	3.5	8.3
Mid	737	3.9	9.9
Low	167	2.2	9.2

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 MMP-9 (total)

Tested Samples

Sample Type	Serum (N = 9)	EDTA Plasma (N = 9)	Citrate Plasma (N = 9)	Normal Lysate (N = 5)	Tumor Lysate (N = 5)
Median (pg/mL)	408,000	58,300	34,700	532	854
Range (pg/mL)	58,000–1,160,000	29,100–705,000	17,900–195,000	12–5,750	589–4,080
% Detected	100	100	100	100	100

Normal serum and plasma samples were diluted 100-fold prior to testing in the assay. Lysates were tested at a protein concentration of 0.5 mg/mL.

Parallelism

Serum			EDTA Plasma		
Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
50	103	95–118	50	80	41–89
200	100	94–103	200	112	106–120
400	100	91–105	400	110	105–124

Samples were tested at different dilutions. One hundred-fold diluted samples were tested to determine the expected concentration of the analyte.

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

Spike Recovery

Spike Level	Serum		EDTA Plasma	
	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
High	121	111–128	96	90–104
Mid	113	105–120	98	91–110
Low	104	98–111	98	93–102

Samples were diluted 100-fold prior to addition of spike. The expected concentration of the analyte in spiked samples was calculated by addition of the Calibrator spike concentration to the measured endogenous (unspiked) sample concentration.

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

Specificity

To assess specificity, the MMP-9 (total) 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, GITR/TNFRSF18, GITRL/TNFSF18, GM-CSF, gp130 (soluble), Granzyme A, Granzyme B, GRO- α , HAVCR2/TIM-3, HVEM/TNFRSF14, I-309, ICOS, ICOSL/B7-H2, IFN- α 2a, IFN- β , IFN- γ , IL-1 α , IL-1 β , IL-1RA, 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- λ 1, IL-2R α , IL-3, 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 α , MIP-5, 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, TARC, Tie-2, TIGIT, TLR-1, TNF-RI, TNF-RII, TNF- α , TNF- β , TPO, TRAIL, TSLP, VEGF-A, VEGF-D, VEGFR-1/Flt-1 and YKL-40. Nonspecific binding was less than 2.0%.

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

The MMP-9 (total) assay will cross-react with the proMMP-9 assay. We do not recommend multiplexing the MMP-9 (total) assay with the proMMP-9 assay.

Diluent Compatibility

Diluents 58 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: MMP-9 (total) is included in Calibrator 29. The human MMP-9 (total) Calibrator is a full-length recombinant protein expressed in a hamster cell line.

Antibodies: The U-PLEX Human MMP-9 (total) 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 from the representative data shown.

Note: MSD recommends that samples be diluted 100-fold prior to analysis in this assay.

