# U-PLEX®

# Mouse IL-9

| Product Options | Catalog Number | Description |
|---|---|---|
| **Multiplex** | K15069M, K25069M<br>K152ACM, K252ACM | U-PLEX Biomarker Group 1 (ms)<br>U-PLEX Metabolic Group 1 (ms) |
| **Singleplex** | K152XKK-1/-2/-4 | U-PLEX Mouse IL-9 Assay with SECTOR™ plates |
| | K152XKK-21/-22/-24 | U-PLEX Mouse IL-9 Assay with QuickPlex® plates |
| | K252XKK-2/-4 | U-PLEX Mouse IL-9 Assay with 384-well plates |
| **Antibody Set** | B22XK-2/-3 | U-PLEX Mouse IL-9 Antibody Set |
| **Protocol** | U-PLEX Product Inserts are available at www.mesoscale.com | |

The 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 Mouse IL-9 Assay tested on U-PLEX 96-well 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



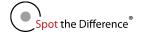| Assay | Median LLOD (pg/mL) | LLOD Range (pg/mL) |
|---|---|---|
| IL-9 | 1.4 | 0.93-2.0 |

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) |
|---|---|---|---|
| High | 1,320 | 3.4 | 11.0 |
| Mid | 264 | 5.9 | 11.2 |
| Low | 54 | 4.7 | 14.2 |

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.

# MSD® U-PLEX Mouse IL-9

## Tested Samples

| Sample Type | Serum (N=8) | Plasma (N=8) | Stimulated Sample (N=8) |
|---|---|---|---|
| Median (pg/mL) | ND | 0.95 | 34 |
| Range (pg/mL) | ND-0.50 | ND-6.7 | 1.9-68 |
| % Detected | 13 | 75 | 100 |

Normal serum and plasma samples were tested without dilution 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 | 134 | 119-153 | 2 | 121 | 117-125 |
| 4 | 143 | 124-161 | 4 | 128 | 123-132 |
| 8 | 151 | 124-171 | 8 | 136 | 129-146 |

Normal mouse 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.

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

## Spike Recovery

| | Serum | | EDTA Plasma | |
|---|---|---|---|---|
| Spike Level | Average % Recovery | % Recovery Range | Average % Recovery | % Recovery Range |
| High | 69 | 61-77 | 74 | 71-78 |
| Mid | 70 | 56-82 | 78 | 74-82 |
| Low | 71 | 46-81 | 75 | 72-76 |

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.

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

## Specificity

To assess specificity, the IL-9 Antibody Set was tested individually against a larger panel of analytes for nonspecific binding (6CKine/Ccl21, BAFF, BCA-1/BLC, CD40, Eotaxin, EPO, GM-CSF, IFN-$\alpha$, IFN-$\beta$, IFN-$\gamma$, IL-1$\beta$, IL-2, IL-4, IL-5, IL-6, IL-9, IL-10, IL-12/IL-23p40, IL-12p70, IL-13, IL-15, IL-16, IL-17A, IL-17A/F, IL-17C, IL-17E/IL-25, IL-17F, IL-21, IL-22, IL-23, IL-27p28/IL-30, IL-31, IL-33, IP-10, KC/GRO, MCP-1, MCP-5/Ccl12, MDC, MIP-1$\alpha$, MIP-1$\beta$, MIP-2, MIP-3$\alpha$, MMP-9 (total), NGAL/LCN2, RANTES, SDF-1$\alpha$, TARC, TNF-RI, TNF-$\alpha$, VEGF-A). Nonspecific binding was less than 0.5%.

% Nonspecificity = (nonspecific signal / specific signal) x 100

The assay may benefit from additional dilution of the sample during testing.

## Diluent Compatibility

The data included in this document have been collected with Assay Diluent 41 and Antibody Diluent 45. 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-9 is included in Calibrator 12. The IL-9 Calibrator is a full-length recombinant protein expressed in insect cells.
**Antibodies:** The U-PLEX Mouse IL-9 Assay uses a rat 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.