U-PLEX®

NHP TARC

Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156ULK-1/-2/-4	U-PLEX NHP TARC Assay with SECTOR™ plates
	K156ULK-21/-22/-24	U-PLEX NHP TARC Assay with QuickPlex Ultra™ plates
	K256ULK-2/-4	U-PLEX NHP TARC Assay with 384-well plates
Antibody Set	B21UL-2/-3	U-PLEX Human TARC 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 TARC 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
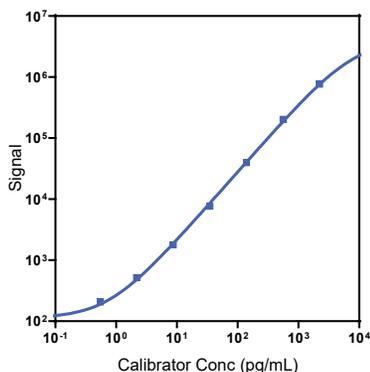
Assay	Median LLOD (pg/mL)	LLOD Range (pg/mL)
TARC	0.27	0.15-0.53

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
TARC	High	902	3.9	8.4
	Mid	89.5	3.5	10.1
	Low	9.7	3.8	10.8

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.

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	1,010	89-111	111	101-125	115	107-120
	Mid	93.8	83-102	97.7	89-110	113	96-130
	Low	90.2	83-100	94.5	84-104	98	76-107
Rhesus Monkey	High	119.6	105-129	111.3	96-123	115	107-120
	Mid	110.1	102-117	1001	84-110	113	96-130
	Low	112.5	107-118	97.9	86-108	98	76-107

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.

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

Tested Samples

	Sample Type	Serum (N=10)	Plasma (N=10)	Spiked Serum (N=5)
Cynomolgus Monkey	Median (pg/mL)	NA	0.4	51.5
	Range (pg/mL)	NA	ND-0.4	48.1-60.6
	% Detected	0	10	100
Rhesus Monkey	Median (pg/mL)	NA	NA	47.3
	Range (pg/mL)	NA	NA	43.1-53.5
	% Detected	0	0	100

Normal serum, EDTA plasma, and cell culture media were diluted 2-fold prior to the assay. ND = not detectable (<LLOD); NA = not applicable due to 0% detected

Dilution Linearity

	Serum (N=5)			Plasma (N=5)			Cell Culture Media (N=5)		
	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range	Fold Dilution	Average % Recovery	% Recovery Range
Cynomolgus Monkey	2	99	97-103	2	102	96-108	2	98	93-104
	4	98	94-107	4	99	96-108	4	90	85-94
	8	97	94-104	8	102	98-109	8	85	79-89
Rhesus Monkey	2	114	106-122	2	98	89-116	2	98	93-104
	4	115	106-128	4	96	88-114	4	90	85-94
	8	115	110-131	8	94	85-113	8	85	79-89

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.

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

Specificity

To assess specificity, the TARC 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%.

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

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: TARC is included in Calibrator 2. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP TARC Assay uses a mouse monoclonal antibody for capture and a mouse monoclonal antibody for detection.
Assay generation: B

Note: This datasheet contains representative assay performance data. In custom multiplex formats, the assay may perform differently than the representative data shown.

For Research Use Only. Not for use in diagnostic procedures.