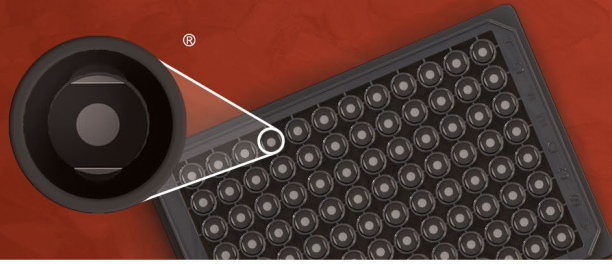
U-PLEX®

NHP I-TAC



www.mesoscale.com®

Ordering Information

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Company Address

Meso Scale Discovery
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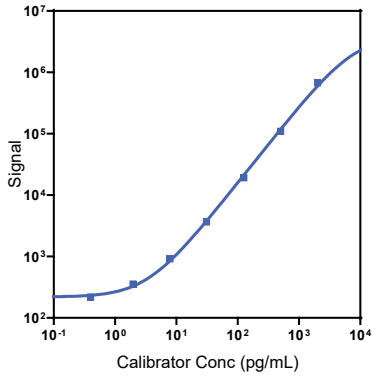
Product Options	Catalog Number	Description
Multiplex	K15068M, K25068M	U-PLEX Biomarker Group 1 (NHP)
Singleplex	K156UWK-1/-2/-4	U-PLEX NHP I-TAC Assay with SECTOR™ plates
	K156UWK-21/-22/-24	U-PLEX NHP I-TAC Assay with QuickPlex Ultra™ plates
	K256UWK-2/-4	U-PLEX NHP I-TAC Assay with 384-well plates
Antibody Set	B21UW-2/-3	U-PLEX Human I-TAC 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 I-TAC 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)
I-TAC	0.80	0.45-1.14

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
I-TAC	High	1,260	6.4	10.0
	Mid	163	6.3	11.7
	Low	17.3	8.5	16.4

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

		Serum (N=5)		Plasma (N=5)		Cell Culture Media (N=5)	
	Spike Level	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range	Average % Recovery	% Recovery Range
Cynomolgus Monkey	High	84	64-106	55	51-60	63	55-70
	Mid	90	67-104	56	51-66	71	63-85
	Low	95	81-105	65	54-77	74	70-84
Rhesus Monkey	High	80	69-91	92	71-106	63	55-70
	Mid	84	75-89	95	83-108	71	63-85
	Low	90	82-96	95	84-108	74	70-84

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)	36.1	13.7	57.8
	Range (pg/mL)	13.5-88.7	8.01-22.3	28.5-92.4
	% Detected	100	100	100
Rhesus Monkey	Median (pg/mL)	24.6	13.2	259
	Range (pg/mL)	6.90-57.0	6.60-24.4	98.8-865
	% Detected	100	100	100

Normal serum and plasma samples were diluted 2-fold prior to the assay.

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	116	114-118	2	139	133-149	2	179	153-236
	4	124	119-129	4	167	155-177	4	207	150-308
	8	133	126-144	8	192	173-206	8	244	151-338
Rhesus Monkey	2	117	112-127	2	104	92-112	2	179	153-236
	4	127	113-145	4	103	84-117	4	207	150-308
	8	130	113-151	8	107	87-123	8	244	151-338

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 I-TAC 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- , I-309, IFN- 2a, IFN- , IL-1 , IL-1 , 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 , MIP-1 , MIP-3 , MIP-3 , MIP-5, SDF-1 , TARC, TNF- , TNF- , 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: I-TAC is included in Calibrator 4. The full-length recombinant protein is expressed in *E. coli*.
Antibodies: The U-PLEX NHP I-TAC 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 than the representative data shown.