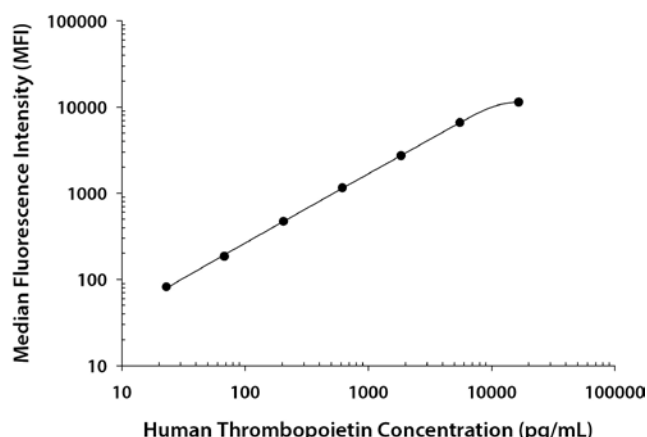


## SPECIFICATIONS AND USE

- |                                 |   |
|---------------------------------|---|
| <b>Recommended Sample Types</b> | • Cell culture supernates, serum, EDTA plasma, and heparin plasma.  |
| <b>Microparticle Region</b>     | • Region-38   |
| <b>Components</b>               | <ul style="list-style-type: none"> <li>• Microparticle Concentrate (Part 894450) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.</li> <li>• Biotin-Antibody Concentrate (Part 892636) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.</li> </ul> |
| <b>Other Supplies Required</b>  | • Magnetic Luminex Performance Assay Human Base Kit A (Catalog Number LUHM000).   |
| <b>Storage</b>                  | <ul style="list-style-type: none"> <li>• Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.</li> <li>• <b>Avoid freezing microparticles.</b></li> <li>• <b>Protect microparticles from light.</b></li> </ul>   |
| <b>Instructions for Use</b>     | • Refer to the Base Kit insert for the Luminex Performance Assay procedure.   |

## TYPICAL DATA

This human Thrombopoietin (Tpo) standard curve is provided only for demonstration. A standard curve must be generated each time an assay is run, utilizing values from the Standard Value Card included in the Base Kit.



Standard	pg/mL	MFI	Average	Corrected
Blank	0	30 31	31	—
1	16,600	11,399 11,421	11,410	11,379
2	5533	6586 6637	6611	6580
3	1844	2752 2772	2762	2732
4	615	1171 1196	1183	1153
5	205	500 500	500	469
6	68	215 216	216	185
7	23	111 113	112	81

## PERFORMANCE CHARACTERISTICS

**All data were collected with assays run as a multiplex.**

**Data obtained with polystyrene and magnetic beads were equivalent.**

**Sensitivity** - The Minimum Detectable Dose (MDD) was determined by adding two standard deviations to the MFI of twenty zero standard replicates and calculating the corresponding concentration.

Thirty assays were evaluated, and the MDD of human Tpo ranged from 0.56-9.94 pg/mL. The mean MDD was 2.81 pg/mL.

**Intra-assay Precision (precision within an assay)** - Three samples of known concentration were tested twenty times on one plate to assess precision within an assay.

**Inter-assay Precision (precision between assays)** - Three samples of known concentration were tested in twenty separate assays to assess precision between assays.

	Intra-assay Precision				Inter-assay Precision		
Sample	1	2	3		1	2	3
n	20	20	20		20	20	20
Mean (pg/mL)	517	1343	2693		548	1303	2653
Standard Deviation	29	73	143		33	89	219
% CV	5.6	5.5	5.3		5.9	6.8	8.3

**Recovery and Linearity** – Samples containing and/or spiked with high concentrations of Tpo were evaluated for recovery and were serially diluted to evaluate assay linearity.

Recovery			Linearity					
Sample Type	Average % Recovery	Range (%)			Cell culture supernates	Serum	EDTA Plasma	Heparin Plasma
Cell culture supernates	102	90-116	1:2	Average % of Expected	98	112	117	94
				Range (%)	93-106	98-127	88-144	89-103
Serum	129	104-156	1:4	Average % of Expected	101	109	128	95
				Range (%)	88-116	92-123	88-182	92-100
EDTA plasma	94	77-114	1:8	Average % of Expected	105	104	137	96
				Range (%)	87-127	87-116	90-193	88-102
Heparin plasma	107	90-122						

**Specificity** - This assay recognizes natural and recombinant human Tpo. The assay was tested for cross-reactivity and interference with the following factors. Less than 0.5% cross-reactivity and interference was observed.

Recombinant human:			Recombinant mouse:		Recombinant rat:	Recombinant porcine:	Recombinant human multiplex partners:	
6Ckine	IL-1 RII	IL-17	G-CSF	IL-8	GM-CSF	GM-CSF	ENA-78	IL-6
CNTF	IL-2 R $\alpha$	IL-18	GM-CSF	IL-10	IFN- $\gamma$	IL-1 $\alpha$	FGF basic	IL-8
$\beta$ -ECGF	IL-2 R $\beta$	LIF	IFN- $\gamma$	IL-17	IL-1 $\alpha$	IL-1 $\beta$	G-CSF	IL-10
FGF acidic	IL-2 R $\gamma$	LIF R	IL-1 $\alpha$	MIP-1 $\alpha$	IL-1 $\beta$	IL-2	GM-CSF	IL-17
FGF-4	IL-3 R $\alpha$	MIP-1 $\alpha$	IL-1ra	MIP-1 $\beta$	IL-2	IL-4	IFN- $\gamma$	MCP-1
FGF-5	IL-4 R	MIP-3 $\alpha$	IL-1	RANTES	IL-4	IL-6	IL-1 $\alpha$	MIP-1 $\alpha$
FGF-6	IL-5 R $\alpha$	MIP-3 $\beta$	IL-2	Tpo	IL-6	IL-8	IL-1 $\beta$	MIP-1 $\beta$
FGF-9	IL-6 R	MCP-2	IL-4	TNF- $\alpha$	IL-10	IL-10	IL-1ra	RANTES
FGF-10	IL-10 R	MCP-3	IL-5	VEGF	TNF- $\alpha$	Leptin	IL-2	TNF- $\alpha$
FGF-18	IL-3	MCP-4	IL-6			TNF- $\alpha$	IL-4	VEGF
GCP-2	IL-7	M-CSF					IL-5	
GRO $\alpha$	IL-9	TNF RI						
GRO $\beta$	IL-11	TNF- $\alpha$						
GRO $\gamma$	IL-12 p40	VEGF <sub>121</sub>						
I-309	IL-12 p70	VEGF <sub>165</sub>						
IGF-I	IL-13	VEGF-D						
IGF-II	IL-15							
IL-1 RI	IL-16							

## TECHNICAL HINTS

- Protect the microparticles and streptavidin-PE from light at all times.
- Refer to the Base Kit Standard Value Card for reconstitution volume and values of the reconstituted standard.
- Diluted microparticles cannot be stored. Make a fresh dilution of microparticles each time the assay is run.
- The use of a magnetic device made to accommodate a microplate is necessary for washing.
- Discrepancies may exist in values obtained for the same analyte utilizing different technologies.

Luminex Performance Assays afford the user the benefit of multianalyte analysis of biomarkers in a complex sample. For each sample type, a single, multipurpose diluent is used to optimize recovery, linearity, and reproducibility. Such a multipurpose diluent may not optimize any single analyte to the same degree that a unique diluent selected for analysis of that analyte can optimize conditions. Therefore, some performance characteristics may be more variable than those for assays designed specifically for single analyte analysis.