Magnetic Luminex® Performance Assay TGF-β3 Kit

Catalog Number: LTGM300
Pack Size: 100 Tests

SPECIFICATIONS AND USE

Recommended Sample Types
- Cell culture supernates, serum, platelet-poor EDTA plasma, platelet-poor heparin plasma, urine, and human milk.

Microparticle Region
- Region-22

Components
- Microparticle Concentrate (Part 894845) is supplied as a 100X concentrated stock (0.075 mL) with preservatives.
- Biotin-Antibody Concentrate (Part 894846) is supplied as a 100X concentrated stock solution (0.075 mL) with preservatives.

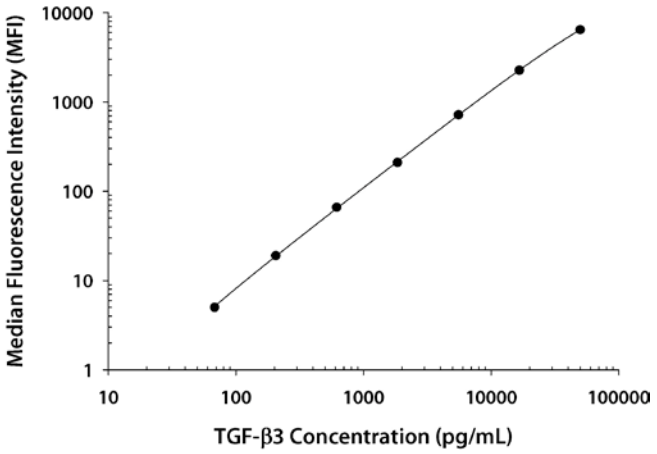
Other Supplies Required
- Magnetic Luminex Performance Assay TGF-β Base Kit (Catalog Number LTGM00).

Storage
- Store the unopened kit at 2-8 °C. Do not use past the expiration date on the label.
- **Avoid freezing microparticles.**
- **Protect microparticles from light.**

Instructions for Use
- Refer to the Base Kit insert for the Magnetic Luminex Performance Assay procedure.

TYPICAL DATA

This TGF-β3 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	1 2	1	——
1	49,850	6365 6504	6435	6434
2	16,617	2217 2317	2267	2266
3	5539	715 718	717	716
4	1846	205 217	211	210
5	615	65 69	67	66
6	205	19 21	20	19
7	68	5 6	6	5

SENSITIVITY

All data were collected with assays run as a multiplex.
Data obtained with polystyrene and magnetic beads were equivalent.

Thirty-eight assays were evaluated, and the minimum detectable dose (MDD) of TGF-β3 ranged from 4.2-42.8 pg/mL. The mean MDD was 14.3 pg/mL.

The MDD was determined by adding two standard deviations to the MFI of twenty zero standard replicates and calculating the corresponding concentration.

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PRECISION

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 ninety-four separate assays to assess precision between assays.

	Intra-assay Precision			Inter-assay Precision		
Sample	1	2	3	1	2	3
n	20	20	20	94	94	94
Mean (pg/mL)	174	1499	11,266	158	1498	10,672
Standard Deviation	17	137	672	27	186	1208
% CV	9.8	9.1	6.0	17.1	12.4	11.3

RECOVERY

Samples were spiked with TGF-β3 and evaluated for recovery.

Sample Type	Average % Recovery	Range
Cell culture supernates	96	65-124%
Serum	76	65-92%
EDTA plasma	82	73-97%
Heparin plasma	83	72-98%
Platelet-poor EDTA plasma	89	69-110%
Platelet-poor heparin plasma	88	64-115%
Urine	106	86-125%

LINEARITY

Samples were spiked with human TGF-β3 and serially diluted to evaluate assay linearity.

		Cell culture supernates	Serum	EDTA Plasma	Heparin Plasma	Platelet-poor		Urine
						EDTA plasma	Heparin plasma	
1:2	Average % of Expected	98	103	100	100	106	108	93
	Range (%)	83-120	96-113	81-111	90-112	94-120	90-123	83-109
1:4	Average % of Expected	91	108	101	102	103	103	83
	Range (%)	75-120	97-122	83-114	91-119	83-127	84-125	69-99
1:8	Average % of Expected	88	109	101	101	104	103	80
	Range (%)	72-114	96-119	83-111	86-111	82-129	80-130	66-107

SPECIFICITY

Note: *Refer to the base kit insert for a complete list of analytes tested for cross-reactivity and interference.*

This assay recognizes natural and recombinant human TGF-β3.

Recombinant human TGF-β1.2 cross-reacts approximately 4.5% in this assay.
Recombinant human TGF-β RIII interferes at concentrations > 50 ng/mL in this assay.

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.

Magnetic Luminex Performance Assays afford the user the benefit of multianalyte analysis of cytokines in a complex sample. A single, multipurpose diluent for each sample type is used to optimize recovery, linearity, and reproducibility. Such a diluent may not optimize any single analyte. Therefore, some performance characteristics may be more variable than those for assays designed specifically for single analyte analysis.