

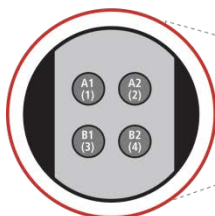
MSD® Human TPO Kit

For quantitative determination in human serum and plasma

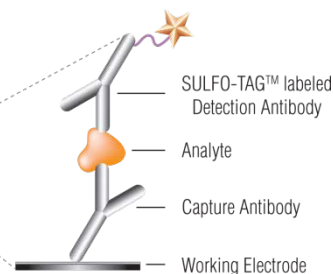
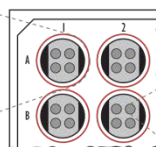


Alzheimer's Disease
BioProcess
Cardiac
Cell Signaling
Clinical Immunology
Cytokines
Growth Factors
Hypoxia
Immunogenicity
Inflammation
Metabolic
Oncology
Toxicology
Vascular

1. TPO
2. BSA blocked
3. BSA blocked
4. BSA blocked



MSD MULTI-SPOT®
96-Well 4-Spot Plate



Thrombopoietin (TPO), also known as megakaryocyte growth and development factor (MGDF), is a glycoprotein hormone that is the key regulator of megakaryopoiesis and thrombopoiesis.¹ TPO is constitutively expressed by liver and bone marrow cells and is cleared from circulation by binding to the cMPL receptor.² TPO stimulates bone marrow progenitor cells to proliferate and mature into megakaryocytes that produce platelets, which play critical roles in hemostasis.³ Circulating TPO levels may be useful in differentiating thrombocytopenias caused by peripheral destruction from those due to thrombopoietic failure: in the former, levels are depressed while in the latter levels are elevated.⁴ Elevated TPO levels may also serve as a biomarker for vascular damage and coronary angina. TPO may enhance platelet aggregation and platelet/monocyte interactions.⁵

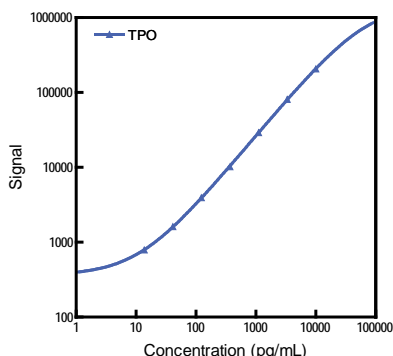
The assay is available on 96-well 4-spot plates. Representative data from the assay is presented below. Visit www.mesoscale.com for a complete listing of our products.

Catalog Numbers

Human TPO Kit	
Kit Size	Catalog #
1 plate	K151NWD-1
5 plates	K151NWD-2
25 plates	K151NWD-4

Assay Sensitivity

The following standard curves illustrate the dynamic range of the Human TPO assay.



	TPO
Average LLOD (pg/mL)	17.4
LLOD Range (pg/mL)	14.2–19.5

The lower limit of detection (LLOD) is a calculated concentration based on a signal 2.5 standard deviations above the background (zero calibrator blank). The LLOD shown above was calculated based on 4 runs.

Ordering Information

MSD Customer Service
Phone: 1-301-947-2085
Fax: 1-301-990-2776
Email: CustomerService@mesoscale.com

Company Address

MESO SCALE DISCOVERY®
A division of
Meso Scale Diagnostics, LLC.
1601 Research Boulevard
Rockville, MD 20850 USA

www.mesoscale.com®

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Not for use in diagnostic
procedures.

MSD Advantage

- **Multiplexing:** Multiple analytes can be measured in one well using typical sample volumes of 25 µL or less without compromising speed or performance
- **Large dynamic range:** Linear range of up to five logs enables the measurement of native levels of biomarkers in normal and diseased samples without multiple dilutions
- **Minimal background:** The stimulation mechanism (electricity) is decoupled from the response (light signal), minimizing matrix interference
- **Simple protocols:** Only labels bound near the electrode surface are excited, enabling assays with fewer washes
- **Flexibility:** Labels are stable, non-radioactive, and conveniently conjugated to biological molecules
- **High sensitivity and precision:** Multiple rounds of label excitation and emission enhance light levels and improve sensitivity

For a complete list of products, please visit our website at www.mesoscale.com.

MSD Cardiac Assays

References

1. Kaushansky K. Thrombopoietin. *N Engl J Med.* 1998 Sep 10;339(11):746-54.
2. Yang C, et al. The physiological response of thrombopoietin (c-Mpl ligand) to thrombocytopenia in the rat. *Br J Haematol.* 1999 May;105(2):478-85.
3. Yu M. Megakaryopoiesis and thrombopoiesis: an update on cytokines and lineage surface markers. *Methods Mol Biol.* 2012;788:291-303.
4. Emmons R V. Human thrombopoietin levels are high when thrombocytopenia is due to megakaryocyte deficiency and low when due to increased platelet destruction. *Blood.* 1996 May 15;87(10):4068-71.
5. Lupia E. Thrombopoietin as biomarker and mediator of cardiovascular damage in critical diseases. *Mediators Inflamm.* 2012;2012:390892.

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