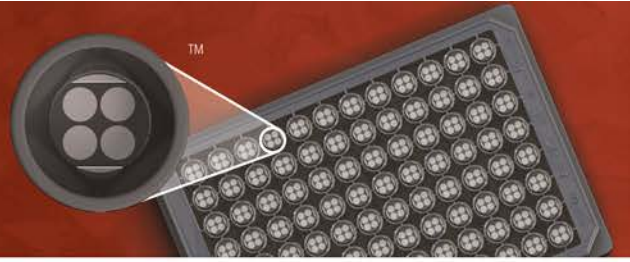
MSD® Human Angiopoietin-1 Kit



For quantitative determination in human serum and plasma

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

Catalog Numbers

Human Angiopoietin-1 Kit	
Kit size	
1 plate	K151LPD-1
5 plates	K151LPD-2
25 plates	K151LPD-4

Ordering information

MSD Customer Service
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Company Address

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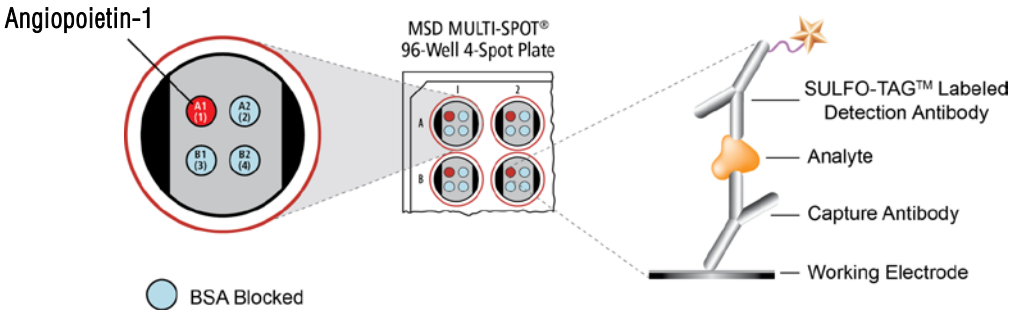


Angiopoietin-1 (Ang-1) plays a role in the modulation of blood vessel plasticity and contributes to vascular maintenance. Ang-1 enhances survival and migration of endothelial cells and induces neovascularization under both normal and pathogenic pro-angiogenic conditions. Ang-1 is expressed in many adult human tissues, primarily by endothelial support cells, megakaryocytes, and platelets.[1,2] Despite their often opposing regulatory roles in angiogenesis, both Ang-1 and angiopoietin-2 (Ang-2) are ligands for the endothelial cell receptor tyrosine kinase, Tie-2.

Ang-1/Tie-2 signaling promotes angiogenesis during the development, remodeling, and repair of the vascular system. These interactions are complex and often mediated by the local cytokine and growth factor microenvironment.[2] Ang-1/Tie-2 signaling also plays a key role in neuronal cell proliferation and survival and in the maintenance of hematopoietic stem cells in non-proliferative states in the bone marrow. Elevated levels of Ang-1 have been observed in several human cancers and are correlated with tumor angiogenesis, growth, and progression.[3] Therefore, targeting the angiopoietin/Tie-2 signaling pathways is a fertile strategy in the development of novel anti-tumor therapeutics.[3,4]

The MSD Human Angiopoietin-1 assay is available on 96-well 4-spot plates. This datasheet outlines the performance of the assay.

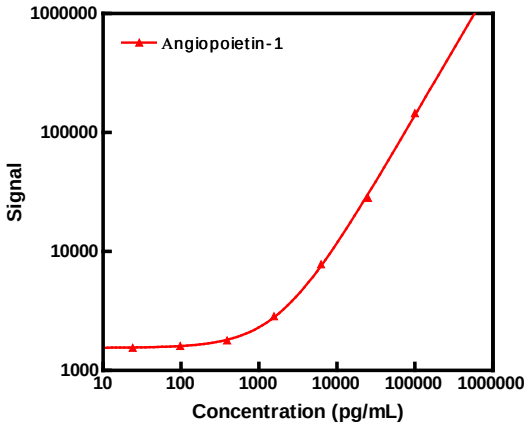
Assay Sensitivity

	Angiopoietin-1
LLOD (pg/mL)	26

The lower limit of detection (LLOD) is a calculated concentration based on a signal 2.5 standard deviations above the background.

Typical Standard Curve

The following standard curve is an example of the wide dynamic range of the Human Angiopoietin-1 assay.



	Angiopoietin-1	
Conc. (pg/mL)	Average Signal	%CV
0	1505	1.1
24	1550	6.6
98	1609	2.9
391	1788	4.4
1563	2860	0.8
6250	7821	2.7
25 000	28 265	2.0
100 000	145 473	1.7

MSD Advantage

- **Multiplexing:** Multiple analytes can be measured in one well 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 signal (light)
- **Simple protocols:** Only labels near the electrode surface are detected, enabling no-wash assays
- **Flexibility:** Labels are stable, non-radioactive, and conveniently conjugated to biological molecules
- **High sensitivity and precision:** Multiple excitation cycles of each label enhance light levels and improve sensitivity

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

References

1. Thomas M, Augustin HG. The role of the Angiopoietins in vascular morphogenesis. Angiogenesis. 2009 12(2):125-37.
2. Fiedler U, Augustin HG. Angiopoietins: a link between angiogenesis and inflammation. Trends Immunol. 2006 Dec;27(12):552-8.
3. Wu X, Liu N. The role of Ang/Tie signaling in lymphangiogenesis. Lymphology. 2010 Jun;43(2):59-72.
4. Peters KG, Kontos CD, Lin PC, et al. Functional significance of Tie2 signaling in the adult vasculature. Recent Prog Horm Res. 2004 59:51-71.