

Technical Information

Angiopoietin-2 ANG2

Cat. No.:	BI-ANG2
Tests:	96
Method:	ELISA
Range:	0 – 400 pmol/l
LLOQ:	6.3 pmol/l (STD2 12.5 pmol/l)
Incubation time:	2 h / 1 h / 30 min
Sample volume:	50 µl pre-diluted sample (1+10)
Sample type:	Serum, plasma
Sample preparation:	Centrifuge freshly collected blood as soon as possible Store centrifuged samples at -20°C for longer storage. Samples are stable up to 4 freeze and thaw cycles.. Hemolyzed or lipemic samples may cause erroneous results.
Reference values:	Median serum (n=11): 28 pmol/l Median EDTA plasma (n=11): 24 pmol/l Median Heparin plasma (n=11): 25 pmol/l Median Citrate plasma (n=11): 23 pmol/l
Species:	Human

Intended use:

Angiopoietin-2 (ANG2) is a 56.9 kDa glycosylated growth factor that is specific for endothelial cells (ECs). ANG2 is expressed in embryonic vessels and contributes to the formation of new vasculature. In adults, it is restricted to sites of vascular remodeling (e.g. ovary, uterus, placenta) and wound healing. ANG2 is regulated by the cytokine vascular endothelial growth factor (VEGF). Together with VEGF, ANG2 induces endothelial cell migration, proliferation, and vascular sprouting. During angiogenesis, ANG2 exerts its effects via the angiopoietin-1/TIE2 receptor signaling system on endothelial cells. Disruption of this signaling leads to the loss of endothelial integrity. In consequence, the endothelium responds to various pro-inflammatory cytokines and growth factors. Thus, ANG2 might cause vascular micro-inflammation in patients with chronic kidney disease (CKD). Various studies demonstrated that ANG2 levels increase with CKD stage and are associated with fluid overload and abnormal cardiac structure. Furthermore, ANG2 concentrations correlate with mortality in patients with CKD stages 4–5. Although ANG2 levels recover after successful kidney transplantation, ANG2 continues to be a cardiovascular risk factor in this population. In cancer, targeting the TIE2-Angiopoietin pathway has shown promising results in some pre-clinical and clinical trials, including studies on recurrent or metastatic breast and renal cell carcinomas.

Intended applications:

- Ischemic pathologies (PAD, CAD)
- Inflammation (Bowel disease, Chron's disease, cirrhosis, sepsis)
- Autoimmune disease (rheumatoid arthritis, psoriasis)
- Artherosclerosis
- Chronic kidney disease
- Diabetic retinopathy
- Cancer

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