



Human Transforming Growth Factor beta 1(TGF-b1)

Specimen Type	Platelet-free EDTA plasma
Specimen Volume	1 mL
Collection	<p>Collect in lavender top tube using EDTA as an anticoagulant. Centrifuge for 15 minutes at 1000 x g within 30 minutes of collection. Centrifuge plasma again at 3000 x g for 10 minutes for complete platelet removal. Freeze at -20°C or below.</p> <p><u>For fixed speed centrifuges such as 645e:</u> Collect in lavender top tube using EDTA as an anticoagulant. Centrifuge 3 times for 10 minutes at 1600 x g while decanting the plasma each time before the next spin within 30 minutes of collection. Freeze at -20°C or below.</p>
Minimum Volume	0.25 mL
Handling	Ship frozen on dry ice.
Rejection Criteria	<ul style="list-style-type: none"> • Hemolyzed specimens • Hyperlipemic specimens • Specimens with particulate matter or microbial contamination • Specimens outside of listed stability
Stability	<p>Refrigerated at 4°C for 2 days</p> <p>Frozen at -20°C for 14 days.</p> <p>Frozen at -70°C for 30 days.</p>
Methodology	ELISA
Reference Range	344 – 2382 pg/mL
Turnaround Time	Up to 4 business days.
CPT Code	83520
Clinical Significance	Transforming growth factor (TGF) play a crucial roles in tissue regeneration, cell differentiation, embryonic development, and regulation of the immune system. Transforming growth factor beta is found in hematopoietic (blood-forming) tissue and initiates a signaling pathway that suppresses the early development of cancer cells.



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	<p>It enhances the deposition of extracellular matrix and may play potential role in wound healing and cirrhosis formation. Many cells synthesize TGF-<i>b</i> and almost all of them have specific receptors for this peptide.</p>
<p>Principle</p>	<p>This quantitative assay employs sandwich ELISA method. Microwells are pre-coated with antibodies against TGF-<i>b</i>1. The diluted patient samples (after activation) are added into the wells and any TGF-<i>b</i>1 present remains bound to the plate. After washing the wells, peroxidase labeled anti-TGF-<i>b</i>1 antibodies are added. Bound conjugate is visualized with TMB substrate and intensity of color is proportional to the concentration of TGF-<i>b</i>1 in the sample. Stop solution is added to each well to stop the reaction.</p>