

Human Tumor Necrosis Factor alpha (TNF-a)

Method:	Enzyme -linked immunosorbent assay (ELISA)
Kit Manufacturer:	R & D Systems Inc., Minneapolis, MN
Description:	This assay employs the quantitative sandwich enzyme immunoassay technique. A monoclonal antibody specific for TNF-a has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any TNF-a present is bound by the immobilized antibody. After washing away any unbound substances, an enzyme-linked polyclonal antibody specific for TNF-a is added to the wells. Following a wash to remove any unbound antibody-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of TNF-a bound in the initial step. The color development is stopped and the intensity of the color is measured.

Collection and Performance Characteristics

Tube type:	Preferred: SST Alternate: EDTA or Heparin
Minimum Volume:	1.0 mL
Lowest Reportable Value:	0.50 pg/mL
Dynamic Range:	0.50-16 pg/mL
Reference Range:	0.55 – 2.816 pg/mL
Precision:	The intra-assay variation is 3.1-8.5% The inter-assay variation is 7.3-10.6%

Normal range:

Sample Type	Mean of Detectable (pg/mL)	% Detectable	Range (pg/mL)
Serum (n=33)	1.206	100	0.550 - 2.816
EDTA plasma (n=22)	1.036	91	ND - 2.139
Citrate plasma (n=14)	0.739	79	ND - 1.195
Heparin plasma (n=26)	0.873	85	ND - 1.411

ND = Non-detectable