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Thrombopoietin ELISA Kit



Image



Publication



Overview

Quantity:	96 tests
Target:	Thrombopoietin (THPO)
Binding Specificity:	AA 22-356
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Brand: PicoKine™ Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA) Analytical Method: Quantitative Detection Method: Colorimetric mmunogen: Expression system for standard: NSO		
Sample Type: Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA) Analytical Method: Quantitative Detection Method: Colorimetric mmunogen: Expression system for standard: NSO	Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse TPO
Analytical Method: Detection Method: Colorimetric Expression system for standard: NSO Immunogen sequence: S22-T356 Expression system for standard: NSO Immunogen sequence: S22-T356	Brand:	PicoKine™
Detection Method: Colorimetric mmunogen: Expression system for standard: NSO Immunogen sequence: S22-T356 Expression system for standard: NSO Immunogen sequence: S22-T356	Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
mmunogen: Expression system for standard: NSO Immunogen sequence: S22-T356 Expression system for standard: NSO Immunogen sequence: S22-T356	Analytical Method:	Quantitative
Immunogen sequence: S22-T356 Expression system for standard: NSO Immunogen sequence: S22-T356	Detection Method:	Colorimetric
Specificity: Expression system for standard: NSO Immunogen sequence: S22-T356	Immunogen:	Expression system for standard: NSO
Immunogen sequence: S22-T356		Immunogen sequence: S22-T356
	Specificity:	Expression system for standard: NSO
Cross-Reactivity (Details): There is no detectable cross-reactivity with other relevant proteins.		Immunogen sequence: S22-T356
	Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<5pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the
	detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation
	of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl
Target Details	
Target:	Thrombopoietin (THPO)
Alternative Name:	Thrombopoietin (TPO) (THPO Products)
Background:	Protein Function: Lineage-specific cytokine affecting the proliferation and maturation of
	megakaryocytes from their committed progenitor cells. It acts at a late stage of megakaryocyte
	development. It may be the major physiological regulator of circulating platelets.
	Background: Thrombopoietin(TPO) is also called megakaryocyte growth and development
	factor(MGDF). TPO, a lineage-specific cytokine affecting the proliferation and maturation of
	megakaryocytes from committed progenitor cells, is believed to be the major physiological
	regulator of circulating platelet levels. Human, dog, and mouse cDNAs for MGDF are highly
	conserved and encode open reading frames for proteins of 353, 352, and 356 amino acids,
	respectively, including predicted signal peptides. MGDF is a novel cytokine that regulates
	megakaryocyte development and is a ligand for the MPL receptor. The human MGDF gene has
	been mapped to chromosome 3q26.3. The standard product used in this kit is gene
	recombinant mouse TPO, consisting of 335 amino acids with the molecular mass of 35KDa. As
	a result of glycosylation, the molecular mass is 75KDa.
	Synonyms: Thrombopoietin, C-mpl ligand, ML, Megakaryocyte colony-stimulating
	factor,Megakaryocyte growth and development factor,MGDF,Myeloproliferative leukemia virus
	oncogene ligand,Thpo,
	Full Gene Name: Thrombopoietin
	Cellular Localisation: Secreted.
Gene ID:	21832
UniProt:	P40226
Pathways:	JAK-STAT Signaling, Hormone Activity
Application Details	

Application Details

Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well

Application Details

	assay was recommended for both standard and sample testing.
Comment:	Tissue Specificity: Found mainly in the liver, kidney and skeletal muscle.
Plate:	Pre-coated
Protocol:	mouse TPO ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay
	technology. A monoclonal antibody from rat specific for TPO has been precoated onto 96-well
	plates. Standards(NSO, S22-T356) and test samples are added to the wells, a biotinylated
	detection polyclonal antibody from goat specific for TPO is added subsequently and then
	followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and
	unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used
	to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color
	product that changed into yellow after adding acidic stop solution. The density of yellow is
	proportional to the mouse TPO amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL,
	62.5pg/mL, 31.2pg/mL mouse TPO standard solutions into the precoated 96-well plate. Add
	0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each
	properly diluted sample of mouse ell culture supernates, serum or plasma(heparin, EDTA) to
	each empty well. See "Sample Dilution Guideline" above for details. It is recommended that
	each mouse TPO standard solution and each sample be measured in duplicate.
Assay Precision:	Sample 1: n=16, Mean(pg/ml): 296, Standard deviation: 11.84, CV(%): 4
	 Sample 2: n=16, Mean(pg/ml): 611, Standard deviation: 33, CV(%): 5.4
	Sample 3: n=16, Mean(pg/ml): 1265, Standard deviation: 82.23, CV(%): 6.5, Sample 1: n=24 Mean(ng/ml): 231 Clandard deviation: 16.7, OV(%): 5.2.
	 Sample 1: n=24, Mean(pg/ml): 321, Standard deviation: 16.7, CV(%): 5.2 Sample 2: n=24, Mean(pg/ml): 746, Standard deviation: 47, CV(%): 6.3
	• Sample 3: n=24, Mean(pg/ml): 1464, Standard deviation: 105.4, CV(%): 7.2
Restrictions:	For Research Use only
Handling	
Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

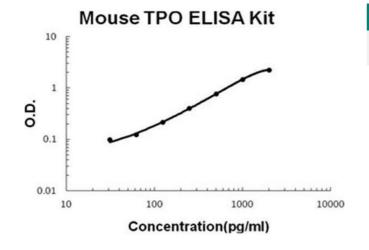
Product cited in:

Martin, Koczera, Simons, Zechendorf, Hoeger, Marx, Schuerholz: "The Human Host Defense Ribonucleases 1, 3 and 7 Are Elevated in Patients with Sepsis after Major Surgery--A Pilot Study." in: **International journal of molecular sciences**, Vol. 17, Issue 3, pp. 294, (2016) (PubMed).

Kasiri, Beer, Nemec, Gruber, Pietkiewicz, Haider, Simader, Traxler, Schweiger, Janik, Taghavi, Gabriel, Mildner, Ankersmit: "Dying blood mononuclear cell secretome exerts antimicrobial activity." in: **European journal of clinical investigation**, Vol. 46, Issue 10, pp. 853-63, (2016) (PubMed).

Teran, Ramirez-Jimenez, Soid-Raggi, Velazquez: "Interleukin 16 and CCL17/thymus and activation-regulated chemokine in patients with aspirin-exacerbated respiratory disease." in: Annals of allergy, asthma & immunology: official publication of the American College of Allergy, Asthma, & Immunology, Vol. 118, Issue 2, pp. 191-196, (2016) (PubMed).

Images



ELISA

Image 1. Mouse TPO PicoKine ELISA Kit standard curve