Biotin Conjugated Anti-EPO Antibody [PSH24-53] - Detector

HA725352B

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	ELISA(Det), ELISA
Clone number:	PSH24-53

Description: Erythropoietin (EPO), also known as erythropoetin, haematopoietin, or haemopoietin, is a glycoprotein cytokine secreted mainly by the kidneys in response to cellular hypoxia; it stimulates red blood cell production (erythropoiesis) in the bone marrow. Low levels of EPO (around 10 mU/mL) are constantly secreted in sufficient quantities to compensate for normal red blood cell turnover. Common causes of cellular hypoxia resulting in elevated levels of EPO (up to 10 000 mU/mL) include any anemia, and hypoxemia due to chronic lung disease and mouth disease.

Conjugate: Biotin-conjugated

Immunogen: Recombinant protein within Human EPO aa 28-193 (HA210852).

Positive control: Recombinant Human EPO protein (HA210852), Recombinant Mouse EPO protein (HA211068).

Subcellular location: Secreted.

Database links: SwissProt: P01588 Human | P07321 Mouse | P29676 Rat

Recommended Dilutions:

ELISA(Det)
ELISA

Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH24-52] to EPO (Capture) (HA725351) and Recombinant Human EPO protein (HA210852) or Recombinant Mouse EPO protein (HA211068) as the standard. The reference range value is 1.9-500 pg/mL.
Use at an assay dependent concentration.

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.05% Proclean 300.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

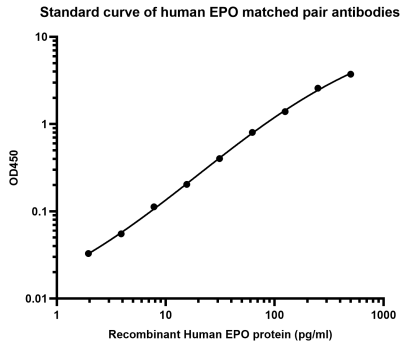

Fig1: Sandwich ELISA analysis of Human EPO matched pair antibodies

Capture: HA725351, EPO Rabbit mAb [PSH24-52]
Detector: HA725352, EPO Rabbit mAb [PSH24-53]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA725351) diluted in carbonate/bicarbonate buffer, at a concentration of 3 µg/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human EPO protein (HA210852) starting from 500 pg/ml to 0 pg/ml and detect antibody (HA725352, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

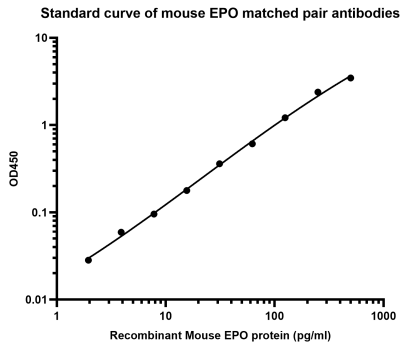

Fig2: Sandwich ELISA analysis of Mouse EPO matched pair antibodies

Capture: HA725351, EPO Rabbit mAb [PSH24-52]
Detector: HA725352, EPO Rabbit mAb [PSH24-53]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA725351) diluted in carbonate/bicarbonate buffer, at a concentration of 3 µg/ml overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Mouse EPO protein (HA211068) starting from 500 pg/ml to 0 pg/ml and detect antibody (HA725352, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

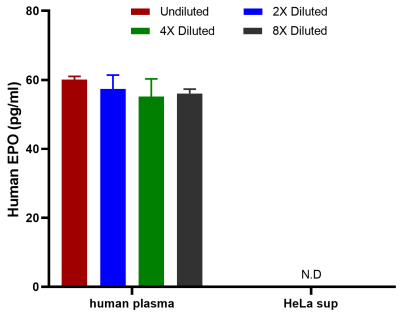

Fig3: Interpolated concentrations of native EPO in human plasma and HeLa supernatant.

Capture: HA725351, EPO Rabbit mAb [PSH24-52]
Detector: HA725352, EPO Rabbit mAb [PSH24-53]

The concentrations of EPO were measured in duplicates, interpolated from the EPO standard curve and corrected for sample dilution. Undiluted samples are 50% human plasma and 50% HeLa supernatant. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean EPO concentration was determined to be 57.2 pg/ml in human plasma.

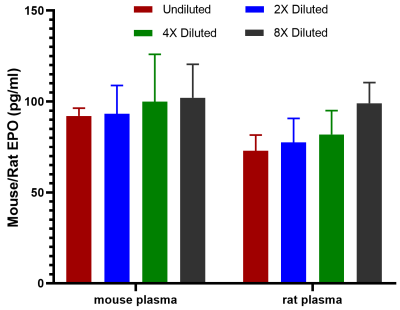

Fig4: Interpolated concentrations of native EPO in mouse plasma and rat plasma.

Capture: HA725351, EPO Rabbit mAb [PSH24-52]
Detector: HA725352, EPO Rabbit mAb [PSH24-53]

The concentrations of EPO were measured in duplicates, interpolated from the EPO standard curve and corrected for sample dilution. Undiluted samples are 50% mouse plasma and 50% rat supernatant . The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean EPO concentration was determined to be 97 pg/ml in mouse plasma, 83 pg/ml in rat plasma.

Background References

1. Wu YW et al. Trial of Erythropoietin for Hypoxic-Ischemic Encephalopathy in Newborns. N Engl J Med. 2022 Jul
2. Sergio CM et al. Erythropoietin regulates signaling pathways associated with neuroprotective events. Exp Brain Res. 2022 May