Pyruvate kinase in RBC

General:

Pyruvate kinase catalyzes the conversion of phosphoenolpyruvate to pyruvate. Thereby phosphate is transferred to ADP and ATP is formed. As the mature erythrocyte has no mitochondria to produce energy, it is dependent on glycolysis as an energy source. ATP stabilizes the sodium/ potassium gradient of the membranes and thus indirectly the shape, the volume and the flexibility of the erythrocyte. In pyruvate kinase deficiency (the second most frequent enzyme deficiency of the erythrocyte, hereditary autosomal recessive) poikilocytosis and increased hemolysis can be observed (chronic, non-spherocytic and Coombs-negative hemolytic anemia). Gall stones and splenomegaly are frequent.

Indication:	hemolytic anemia, hepatosplenomegaly
Material:	2 ml EDTA blood
Preanalytics:	Transportation periods of >3 hours request centrifuged RBC (unfrozen) with EDTA plasma (frozen)
TAT:	7-10 days*
Method:	photometry
Units:	U/g Hb
Ref.- range:	5.3 - 17.3
Note:	see also **Hemolytic anemia**

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit http://www.fml-dubai.com/parameter-listings/

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