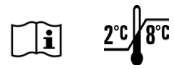
For research use only. Not for use in diagnostic procedures.

Prostaglandin E1

for platelet aggregation studies

PGE1 reagent kit

REF **08115982 001**



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Product description

The PGE reagent is a lyophilized preparation of prostaglandin E1, stock activity equivalent to 300 nM.

Test principle

PGE1 is a natural platelet inhibitor which triggers an increase in cAMP levels in the platelet. cAMP is a so-called second messenger, i.e. an intracellular signalling molecule. A decrease of the cAMP level in the platelet leads to platelet activation. An increase of the cAMP level counteracts platelet activation.

Prostaglandin E1 Reagent is used in combination with ADPtest reagent. The addition of 20 µL PGE1 to the ADPtest (9.4 nM PGE1 final concentration) induces a moderate inhibition of platelet activation in normal blood samples, but a significant increase of sensitivity of the ADPtest to platelet inhibition by substances that affect platelet aggregation through ADP receptor binding. Therefore this modified test is named ADPtest HS (high sensitivity).

Material provided

REF 08115982 001: 3 vials for 1.0 mL.

Lyophilized reagent containing prostaglandin E1: activity equivalent to 300 nM.

Materials required (but not provided)

1. Platelet aggregometer
2. Purified water (distilled or deionized)
3. Aggregometer test cells with stir bars
4. Micropipettes – 0.5 µL to 100 µL required for reagents
5. Pipettes – 100 µL to 1 mL required for blood samples, saline or NaCl/$CaCl_2$ solution and purified water
6. Physiological saline (NaCl 0.9 %) for irrigation or NaCl//$CaCl_2$ solution (**REF 08115974 001**) for the dilution of whole blood sample

Instrumentation

The PGE1 reagent will perform as described when used on the Multiplate® Analyzer. Follow the manufacturer's instructions.

Precautions and warnings

The PGE1 reagent is for research use only. Not for use in diagnostic procedures. Not for injection or ingestion.

Exercise the normal precautions required for handling all laboratory material.

Disposal of all waste material should be in accordance with local guidelines.

Avoid foam formation in all reagents and sample types.

Reagent preparation

Carefully reconstitute each vial of PGE1 reagent with 1.0 mL of high purity (distilled or deionized) water. Gently swirl and allow vial to stand closed for 10 minutes at 18-25 °C. Swirl the vial carefully to produce a homogeneous solution before use – do not shake! Avoid the formation of foam.

The solution should be clear and colourless.

Note: The vials are filled with an inert gas instead of a vacuum.

To achieve maximum stability after reconstitution, pipette ≥ 100 µL aliquots of the reagent into micro test tubes for daily use.

Storage and stability

Store at 2-8 °C.

The lyophilized reagents are stable up to the stated expiration date.

For optimal handling, reconstituted reagent may be aliquoted and the aliquots stored frozen at (-25) - (-15)°C. If reconstituted reagent is not aliquoted into micro test tubes, the original vial should be stored in an upright position. Reconstituted vials should remain tightly closed when not in use.

Stability of the reconstituted reagent:	
at 18-25 °C	24 hours
at 2-8 °C	7 days
at (-25) - (-15)°C	4 weeks
after one time thawing at 18-25 °C	24 hours

Protect reagent from exposure to light, air and elevated temperature ranges.

Sample collection

Blood collection should be performed with caution to avoid prolonged venous stasis and using a large-bore needle during draw. Avoid foam formation in the blood collection tube. Gently invert the collection tube 4 to 5 times to ensure complete mixing of the content. Do not freeze or refrigerate samples. Do not preheat the blood before analysis.

Blood samples should be collected in sterile standard lithium-heparin tubes or commercial hirudin blood collection tubes (REF 08128812 001). There is no experience for this reagent with the use of citrated blood.

The anticoagulant used for blood sample collection significantly affects the results of the test.

The blood collection system must be standardised at each centre. It is only possible to compare the results of an individual sample when the same sample anticoagulant (i.e. lithium-heparin or hirudin) is employed.

Test procedure

Refer to the appropriate operator's manual for analyzer-specific assay instructions.

Test procedure for ADPtest HS with hirudin-coagulated or lithium-heparin-coagulated blood:	
Saline solution, 0.9 % (prewarmed to 37 °C)	300 µL
Sample (18-25 °C)	300 µL
Incubation	180 seconds
PGE1 reagent (reconstituted)	20 µL
ADPtest reagent (reconstituted)	20 µL
Measuring time	6 minutes

Final concentration of PGE1:9.4 nM.

Temperature conditions and incubation times must be precisely observed.

Note: It is important that the tip of the micropipette is immersed in the sample when the reagent is injected.

When using the Multiplate® electronic pipette in auto mode follow the test instructions displayed by the Multiplate® software.

Quality Control

Laboratories should follow generally accepted quality control practices when proficiency testing is not available. It is good laboratory practice to run a drug-free normal control whenever reagents are reconstituted or thawed.

Limitations - interferences

Samples should be analyzed within the period of 0.5-3 hours after blood collection.

The platelet count in the test sample must be above 100,000 when testing in whole blood.

The saline solution (NaCl 0.9%) must not contain any additives such as methyl ester. This can cause false-positive results.

It is important to pay close attention to temperatures and incubation times. The use of non-preheated saline diluent solution or the introduction of shorter incubation times may skew results.

Manufacturer

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