HYPHEN BioMed
155 rue d'Eragny, 95000 Neuville-sur-Oise, France
Tél : +33 (0)1 34 40 65 10
Fax : +33 (0)1 34 48 72 36
www.hyphen-biomed.com
info@hyphen-biomed.com

CE 0197 UKCA

IVD

BIOPHEN™ Edoxaban Calibrator Low

REF 226401

CAL I | CAL II | CAL III 4 vials x 1 mL

BIOPHEN™ Edoxaban Calibrator

REF 226501

CAL 1 | CAL 2 | CAL 3 4 vials x 1 mL

English, revision: 08-2023

INTENDED USE:

For calibration of Edoxaban assays, using a quantitative automated method.
This device of *in vitro* diagnostic use is intended for professional use in the laboratory.

SUMMARY AND EXPLANATION:

Technical:
These calibrators are used to establish the calibration curve for anti-Xa chromogenic assays of Edoxaban in plasma (BIOPHEN™ DiXaI and BIOPHEN™ Heparin LRT, low range / standard range).
Clinical:
Though Edoxaban monitoring is not needed in treated patients, measurement in human plasma may be of use in certain cases, particularly in the event of emergency surgery or of suspected overdosage (bleeding risk).

REAGENTS:

CAL I Lyophilized human plasma without Edoxaban.
CAL II Lyophilized human plasma containing approximately 50 ng/mL of Edoxaban.
CAL III Lyophilized human plasma containing approximately 100 ng/mL of Edoxaban.
CAL 1 Lyophilized human plasma without Edoxaban.
CAL 2 Lyophilized human plasma containing approximately 250 ng/mL of Edoxaban.
CAL 3 Lyophilized human plasma containing approximately 500 ng/mL of Edoxaban.

Calibrator plasmas contain stabilizing agents.

The calibrator concentrations may vary slightly from one batch to another. For the assay, see the exact values indicated on the flyer provided with the kit used.

The product is classified as non-hazardous and is not subject to labeling according to EC Regulation No. 1272/2008 [CLP].

WARNINGS AND PRECAUTIONS:

- Some reagents provided in these kits contain materials of human origin. Whenever human plasma is required for the preparation of these reagents, approved methods are used to test the plasma for the antibodies to HIV 1, HIV 2 and HCV, and for hepatitis B surface antigen, and results are found to be negative. However, no test method can offer complete assurance that infectious agents are absent. Therefore, users of reagents of these types must exercise extreme care in full compliance with safety precautions in the manipulation of these biological materials as if they were infectious.
- Waste should be disposed of in accordance with applicable local regulations.
- Any serious incident that has occurred in relation to the device shall be reported to the manufacturer and the competent authority of the Member State in which the user and/or the patient is established.
- Summary of Safety and Performance (SSP) is available in the European database on medical devices (see Eudamed public website: https://ec.europa.eu/tools/eudamed or on request to HYPHEN BioMed).

REAGENT PREPARATION:

Gently remove the freeze-drying stopper, to avoid any product loss when opening the vial.

CALI | CALII | CALIII | CAL1 | CAL2 | CAL3 Reconstitute the contents of each vial with exactly **1 mL of distilled water.**
Shake vigorously until complete dissolution while avoiding formation of foam and load it directly on the analyzer following Application Guide instruction.

This plasmatic reagent can be more or less turbid after reconstitution. This turbidity is mainly due to plasma lipids that, after freeze-drying, become "less" soluble and may form a slight deposit. If necessary, let each vial stabilize 10 minutes at room temperature and shake before use.

STORAGE AND STABILITY:

Unopened reagents should be stored at 2-8°C in their original packaging. Under these conditions, they can be used until the expiry date printed on the kit.

CALI | CALII | CALIII | CAL1 | CAL2 | CAL3 Reagent stability after reconstitution, free from any contamination or evaporation, and stored closed, is of:

- **7 days** at 2-8°C.
- **60 days** frozen at -20°C or less*
- **Stability on board of the analyzer: see the specific Application Guide.**

*Thaw only once, as rapidly as possible at 37°C and use immediately.

REAGENTS AND MATERIALS REQUIRED BUT NOT PROVIDED:

- Laboratory material.

TRACEABILITY:

Lot to lot variability measured on 3 lots is: %CV ≤ 10%.

Calibrators are traceable to internal standard of reference using the LC-MS/MS reference measurement procedure for Edoxaban.
Certificate of traceability and uncertainty is available on the HYPHEN BioMed website:

Uncertainty			
CALI	± 0.0 ng/mL	CAL1	± 0.0 ng/mL
CALII	± 3.5 ng/mL	CAL2	± 10 ng/mL
CALIII	± 3.9 ng/mL	CAL3	± 13 ng/mL

QUALITY CONTROL:

For calibration of Edoxaban assays by chromogenic methods (low range or standard range), with BIOPHEN™ Heparin LRT (221011, 221013 and 221015) and BIOPHEN™ DiXaI (221030) kits.
The target values are determined from multi-reagent and multi-instrument tests.
The use of quality controls serves to validate method compliance, along with between-series assay homogeneity for a given batch of reagents.
Include the quality controls with each series, as per good laboratory practice, in order to validate the test.
A new calibration curve should be established, preferably for each test series, and at least for each new reagent batch, or after analyzer maintenance, or when the measured quality control values fall outside the acceptance range for the method.

LIMITATIONS:

- If the calibrators are used under measurement conditions other than those validated by HYPHEN BioMed, the test results may vary. The laboratory is responsible for validating the use of these calibrators in its own analytical system.
- Any reagent presenting no limpid appearance or showing signs of contamination must be rejected.

REFERENCES:

1. Bathala MS *et al.* Pharmacokinetics, biotransformation, and mass balance of edoxaban, a selective, direct factor Xa inhibitor, in humans. Drug Metab Dispos. 2012.
2. Bounameaux H and Camm AJ. Edoxaban: an update on the new oral direct factor Xa inhibitor. Drugs. 2014.
3. Furugohri T *et al*. DU-176b, a potent and orally active factor Xa inhibitor: in vitro and in vivo pharmacological profiles. J Thromb Haemost. 2008.
4. Patel MR, Washam JB. Edoxaban and the need for outcomes-based NOAC dosing. Lancet. 2015
5. Honda Y and Morishima Y. Thrombin generation induced by tissue factor plus ADP in human platelet rich plasma: A potential new measurement to assess the effect of the concomitant use of an oral factor Xa inhibitor edoxaban and P2Y12 receptor antagonists. Thromb Res. 2015
6. Ogata K *et al.* Clinical safety, tolerability, pharmacokinetics, and pharmacodynamics of the novel factor Xa inhibitor edoxaban in healthy volunteers. J Clin Pharmacol. 2010
7. Ruff CT *et al.* Association between edoxaban dose, concentration, anti-Factor Xa activity, and outcomes: an analysis of data from the randomised, double-blind ENGAGE AF-TIMI 48 trial. Lancet. 2015.
8. Zalpour A and Oo TH. Update on Edoxaban for the Prevention and Treatment of Thromboembolism: Clinical Applications Based on Current Evidence. Adv Hematol. 2015.

e-IFU (other languages) are available on www.hyphen-biomed.com.
For customer support or Application Guides, please contact your local provider or distributor (see www.hyphen-biomed.com).

Changes compared to the previous version.

The following symbols may appear on the product labeling:

REF	Catalogue number	LOT	Batch code	IVD	*In-vitro* diagnostic medical device
Rx	Numerical < x> identification of reagent		See instructions for use	WHO STD	WHO standard code
	Temperature limitation		Manufacturer	YYYY-MM-DD	Use by
CE XXXX	CE marking of conformity with notified body ID number.	→	Reconstitution volume	CONTENTS	Contents
Cx	Numerical < x> identification of control	i-MA	See instructions in Method Application guide	CONTAINS	Contains
EXP	Expiration date	Σ	Contains sufficient for <n> tests	UNIT	Measurement unit
TARGET VALUE	Target Value		Keep away from sunlight and heat	CALx	Numerical < x> identification of calibrator
UDI	Unique Device Identifier	BIO	Contains biological material of animal origin		Contains human blood or plasma derivatives
DANGER	Danger	WARNING	Warning	UK CA	UKCA marking of conformity
	Biological risks	ACCEPTANCE RANGE			Acceptance range