

Protac®

Direct Protein C Plasma Activator

REF 245

Description

Protac® is a rapid activator of Protein C isolated from the venom of the copperhead snake *Agkistrodon contortrix* and closely related species. It is a single chain glycoprotein with a molecular weight of 36,000 to 42,000 Daltons as visualized by SDS-PAGE analysis. PROTAC reacts with human Protein C as well as Protein C of other vertebrates. The resulting activated Protein C (APC) activity may be measured using a specific chromogenic substrate, such as SPECTROZYME® PCa (REF 336) in the ACTICLOT® Protein C assay (REF ACC-45) or by measuring its prolonging effect on the activated partial thromboplastin time (APTT).

PROTAC requires neither thrombomodulin nor calcium for Protein C activation. It does not activate human prothrombin or factor X and thus appears to be a specific Protein C activator under practical conditions. PROTAC does not generate any significant amidolytic activity from Protein C depleted plasma and does not affect the APTT of Protein C-free plasma. PROTAC is unaffected by various proteinase inhibitors.

One (1) Unit of Protac is the amount that activates the Protein C content in 1 mL of normal human plasma at 37°C within 5 minutes.

Applications

APTT Assay (Clotting Method)

1. Combine 25 µL of human citrated plasma, 25 µL of Protac at 0.1 units/mL, and 25 µL of Actin®†.
2. Incubate for 4 minutes at 37°C.
3. Add 25 µL of 25 mM CaCl₂.
4. Measure the clotting time.

† Actin® is a registered tradename of Siemens Diagnostics

Chromogenic Method

1. Combine 50 µL of human citrated plasma and 50 µL of Protac at 0.5 units/mL.
2. Incubate for 5 minutes at 37°C.
3. Add 800 µL of 50 mM Tris-HCl, pH 8.4
4. Add 100 µL of 4 mM SPECTROZYME® PCa (BioMedica Diagnostics REF 336).
5. Measure the change in absorbance of the solution per min ($\Delta OD/min$) at a wavelength of 405 nm.

Presentation

Screw capped glass vial containing 3 units of PROTAC, lyophilized. If reconstituted free of bacteria, may be refrigerated up to 1 week; store aliquots frozen.

Reconstitution

Add 100 µL of filtered deionized or sterile water to generate a 100 µg/mL solution.

Storage

Store the vial of lyophilized venom at 2°-8°C. Reconstituted venom may aliquoted and stored for up to 30 days at 2°-8°C or for up to one month at -20°C.

References

1. Francis, Jr., R. B., *et al.* *American Journal of Clinical pathology* 1987; 87: 619-625.
2. Stocker, K., *et al.* *Behring Inst Mitt* 1986; 79: 37-47.

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Definition of Symbols

	Consult instructions for use
	Manufacturer
	Refer to Safety Data Sheet
	Contains...
	Temperature Limitation
	Lot Number
	Expiration Date
	Catalog Number