

# Convulxin

**Description:** Convulxin, a heterodimeric C-type lectin isolated from *Crotalus durissus terrificus* venom, activates mammalian platelets via binding and clustering of GPVI-receptors under physiological conditions. Occupation and clustering of GPVI activates Src family kinases, phosphorylating Fc receptor  $\gamma$ -chain and activating p72SYK that is critical for downstream activation of platelets.

**Application:** Studies on platelet receptors.

**Origin:** *Crotalus durissus terrificus* snake venom **MW:** 84'000

**Assay:** The assay is performed in an aggregometer

485 $\mu$ l platelets suspension ( $5 \times 10^8$ platelets/ ml)
=> are incubated for 1 – 2 min at 37°C, until base line is stable
Add 5 $\mu$ l CaCl <sub>2</sub> 200 mM
Add 5 $\mu$ l MgCl <sub>2</sub> 200 mM
=> wait until base line is stable
Add 5 $\mu$ l collagen solution 0.5 mg/ ml (positive control) or Add 5 $\mu$ l Convulxin 0.1 $\mu$ g/ ml (diluted in HEPES buffer)
=> measure aggregation at 37°C

**Inhibitors:** Prostaglandins are strong inhibitors of convulxin-induced aggregation.

**Stability:** Lyophilised in vials 2 years at -20°C

**Storage:** May be used until the expiry date given on the label when stored unopened, protected from moisture, in the dark, below -20°C. Avoid contamination of the reagents with micro-organisms. Shipment of product does not require cooling during transportation.

**Storage after reconstitution:**

+15 to +25°C	8 hours
+2 to +8°C	2 days
-80°C	1 month

The reconstituted product can be frozen immediately and stored at -80°C. Avoid refreezing.



- References:** M. Cicmil, J.M. Thomas, T. Sage, F.A. Barry, M. Leduc, C. Bon, J.M. Gibbins. Collagen, convulxin, and thrombin stimulate aggregation-independent tyrosine phosphorylation of CD31 in platelets. Evidence for the involvement of Src family kinases. *J Biol Chem* 2000; 275:27339-47
- F. Niedergang, A. Alcover, C.G. Knight, R.W. Farndale, M.J. Barnes, I.M. Francischetti, C. Bon, M. Leduc. Convulxin binding to platelet receptor GPVI: competition with collagen related peptides. *Biochem Biophys Res Commun* 2000; 273:246-50
- I.M. Francischetti, B. Saliou, M. Leduc, C.R. Carlini, M. Hatmi, J. Randon, A. Faili, C. Bon. Convulxin, a potent platelet-aggregating protein from *Crotalus durissus terrificus* venom, specifically binds to platelets. *Toxicon* 1997; 35:1217-28
- J. Polgar, J.M. Clemetson, B.E. Kehrel, M. Wiedemann, E.M. Magnenat, T.N.C. Wells, K.J. Clemetson. Platelet activation and signal transduction by Convulxin, a C-type lectin from *Crotalus durissus terrificus* (tropical rattlesnake) venom via the p62/GPVI collagen receptor. *The Journal of Biological Chemistry* 1997; 272:13576-83

**Package size:** Vial containing 50 µg/ vial

**Code:** 119-02

FOR RESEARCH USE ONLY. NOT FOR HUMAN USE OR DRUG USE.