

CRP- A Collagen Related Peptide

Catalogue Number: CRP-A0.5-WIN03 (0.5mg Vial)

Specificity: CRP-A proven to be a strong agonist of Glycoprotein GPVI receptor platelet activation pathway. **For Research Use Only.**

Biological activity Ability of CRP-A to initiate platelets activation and aggregation has been tested using p-selectin expression and light transmission aggregometry respectively **Batch to batch consistency** on CRP-A response to platelet activation and aggregation

Minimum dose that causes maximum aggregation is between 0.08 µg/mL and 0.14 µg/mL

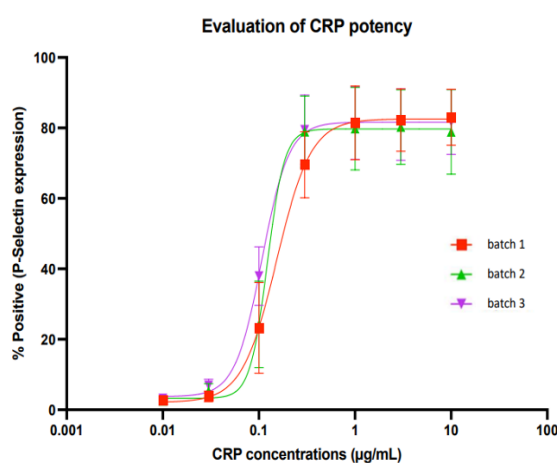
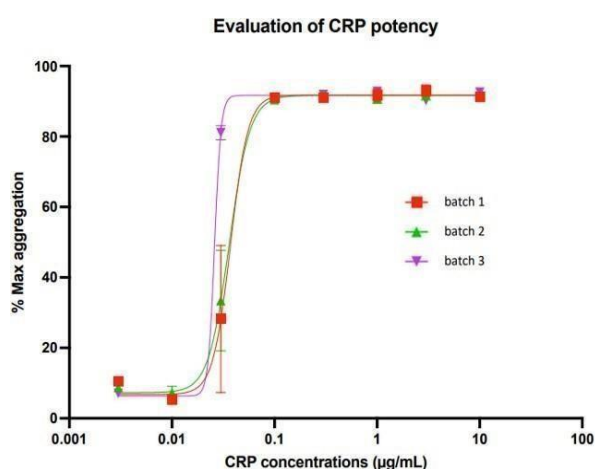
Minimum dose that causes maximum activation is between 0.5 µg/mL and 1.00 µg/mL

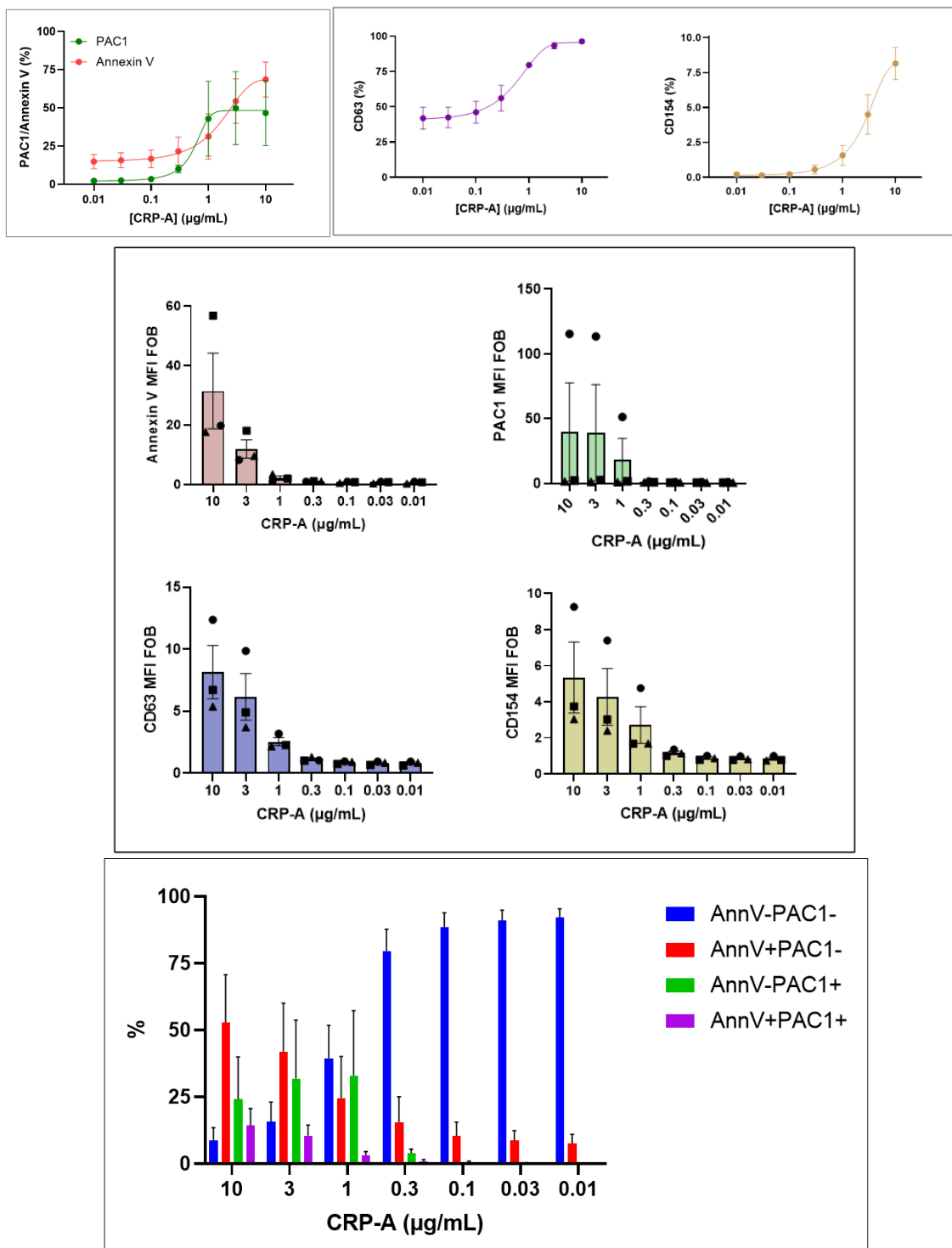
CRP-A activity is in the range of concentration from 0.03 µg/mL to 10 µg/mL

- CRP-A EC50 in flow cytometry is between 0.05 and 0.1 µg/mL
- CRP-A EC50 in PRP aggregation is between 0.05 and 0.1 µg/mL

CRP-A provides:

- High potency for platelet aggregation and activation in PRP and whole blood
- Robust induction of PKC substrate phosphorylation and tyrosine phosphorylation in immunoblotting
- Proven triple-helical structure that drives full GPVI-mediated platelet activation
- Stable, scalable manufacturing with strong batch-to-batch consistency
- High purity (>95%) with a strong, reproducible dose-response profile
- Full activity maintained across multiple solvent systems
- Long-term stability of up to three years





With effective concentrations as little as 0.01 $\mu\text{g/mL}$, CRP-A induced potent, dose-dependent platelet activation when measured by whole blood platelet flow cytometry. Annexin V binding, as a measure for phosphatidylserine exposure, reached up to 80% at the highest concentration of CRP-A, whilst concomitant, minimal PAC1 (integrin $\alpha\text{IIb}\beta\text{3}$ activation) binding suggests successful procoagulant platelet formation (Annexin V+PAC1-). In addition, CD63 binding as a marker of dense and lysosomal granule secretion, as well as CD154 binding as a marker of α -granule secretion, reveal platelet degranulation following stimulation with as little as 0.1 $\mu\text{g/mL}$ CRP-A, with up to 10-fold and 6-fold increases in marker expression at the highest concentration, respectively.

Stability: CRP-A crosslinking process has been optimized with a high stability rate Homogeneity of the triple helical structure from batch to batch.

Purity: When dissolved in water and stored at -20°C , CRP-A maintains over 99% UV-purity for up to 6 months.

Format: Lyophilized powder. When stored in powder format at -20°C , CRP-A maintains over 95% UV-purity for **up to 3 years.**

Sample dissolved in water	UV-purity (230nm)
Month 6; -20°C	99.1%
Month 2; -20°C	99.8%
Month 6; 4°C	98.4%
Month 2; 4°C	99.5%
Month 6; RT	97.7%
Month 2; RT	98.7%
Start	99.8%

Preparation: Before using this product, ensure that all material is collected at the bottom of the vial and not adhered to the sides or the inside of the lid. This can be done by gently tapping the closed vial on a hard surface or by briefly centrifuging it.

We recommend fully dissolving the entire contents of the vial before transferring the solution to ensure the complete CRP-A sample is used.

Warning: If any material adheres to the lid during reconstitution, it may not fully dissolve, as small solvent volumes often do not reach the lid during shaking or vortexing.

CRP-A powder can be dissolved in water, saline, or 0.01 M acetic acid. Reconstitute to a minimum concentration of 2.5 mg/mL using any of these solvents. Vortex the solution before each use to ensure full homogeneity.

Storage

	Storage Temperature	Storage Period
Lyophilized - long term storage	-20°C	36 months
Lyophilized - short term storage	Room temperature	4 weeks
2.5mg/ml stock solution	-20°C	6 months
2.5mg/ml stock solution	$+4^{\circ}\text{C}$	6 months
Less than 1mg/ml working solution	$+4^{\circ}\text{C}$	6 months

Store reconstituted CRP-A in smaller aliquots to avoid multiple freeze thaw cycles

As the manufacturer, we recommend freeze-drying the aliquots intended for later use. These aliquots can then be stored as powder in the freezer and reconstituted immediately before measurement.