

Effect of Apixaban on cryocheck™ Hex LA™ Testing

Hex LA is a qualitative test kit to aid in the detection of lupus anticoagulant (LA) by the application of hexagonal phase phospholipids. During development of Hex LA, interference studies using the oral anticoagulant rivaroxaban (a Factor Xa inhibitor) were conducted and the drug did not interfere with the interpretation of LA results¹.

Apixaban is another commonly used oral anticoagulant that also works by inhibiting Factor Xa. A summary is provided below of recent studies in which samples containing apixaban were tested with Hex LA.

Method & Results

LA negative and LA positive plasmas were spiked with apixaban at 500 and 1000 ng/mL (above the 95th percentile peak concentration of 321 ng/mL²) and tested with Hex LA³.

Clot times for LA Start and LA Correct, along with the delta, are displayed in **Figure 1**. Delta results are summarized in **Table 1**.



Figure 1.

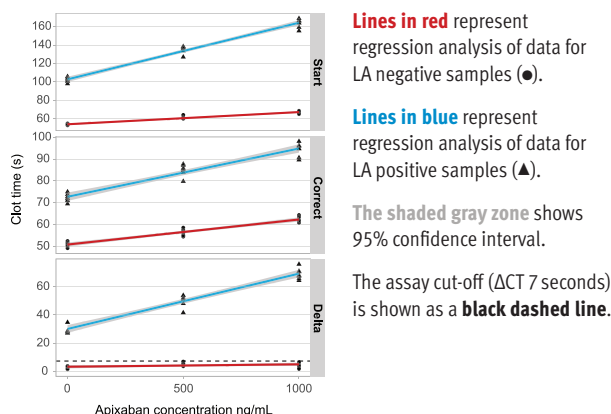


Table 1.

Plasma Type	Apixaban Conc. (ng/mL)	Hex LA (delta clot time)
LA Negative	500	5.2 ± 1.2
	1000	4.6 ± 2.1
LA Positive	500	50.2 ± 4.3
	1000	69.0 ± 3.9

Conclusions

Apixaban in plasma did not interfere with the interpretation of Hex LA results. Increased delta correction was observed in LA positive samples.

Similar results were observed in a retrospective study examining LA assays, in which Hex LA was included⁴. Plasma samples were from patients with varying clinical histories. Many samples were from patients on anticoagulants, including apixaban. LA diagnosis was based on all laboratory tests.

Samples established as LA positive and containing apixaban tested positive with Hex LA. LA negative samples containing apixaban tested negative with Hex LA. These results suggest lack of interference from apixaban in Hex LA result interpretation.

References

1. Instructions for Use, cryocheck™ Hex LA™
2. B.T. Samuelson, A. Cuker. *Measurement and Reversal of the Direct Oral Anticoagulants*. Blood Reviews 2017, 31, 77.
3. Mushfiqur Rahman, Ali Sadeghi-Khomami, Karen M. Black. *Effect of High-Dose Direct Anticoagulant Drugs and DOAC-Remove™ on Lupus Anticoagulant Detection by a Hexagonal Phase Phospholipid Assay*. Presented at ISTH (2023).
4. Jessica D. Anderson; Tamara Sabih; Yuying Xing; Lili Zhao; Marc D. Smith. *Evaluation of a Novel Lupus Anticoagulant Assay Designed to Reduce False Positive Results Due to Iatrogenic Anticoagulation: A Retrospective Study at a Single Health System*. Presented at ISLH (2023).