

Client Depletion Assay Comparing Paclitaxel to Hsp90 Inhibitors



Taylor Cartmell, Lori Wagner, Klaudia Kiel, Joanna Jurczak, Dr. Steve Hartson

Question

Is the client depletion assay test specific to Hsp90 inhibitors or a generalized cell response to cell death?

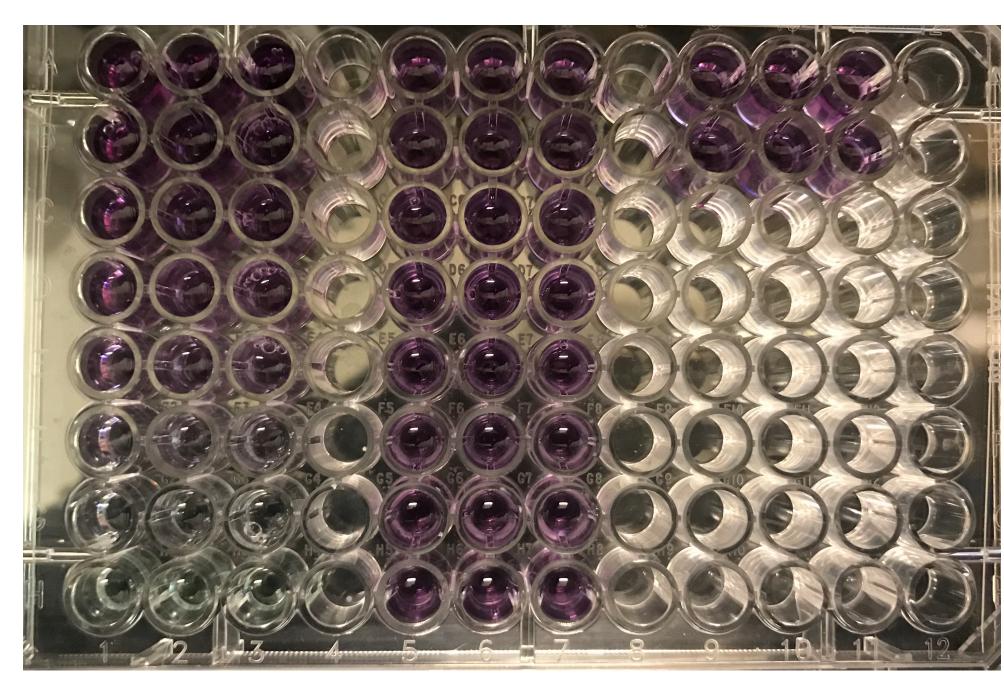
Background Information

- Paclitaxel is a proven chemotherapy drug that is used on cancer patients
- Heat Shock Protein 90s
 (Hsp90s) are proteins that target other proteins that have folded themselves incorrectly and works to unfold these proteins and fold them correctly
- Hsp90 inhibitors are compounds that are found to decrease the amount of client proteins Hsp90s can unfold

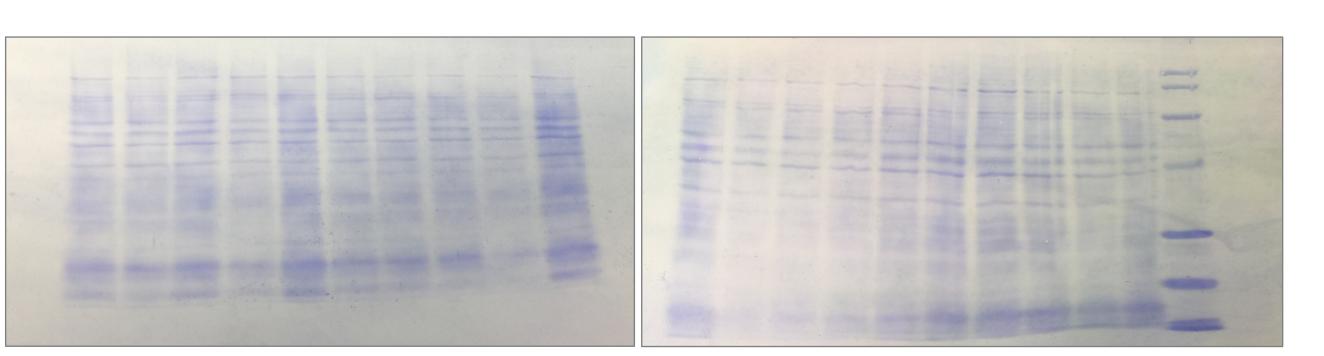
Results

- BCA is used to calculate the number of proteins we have in our concentration of cells
- This then led to electrophoresis and electotransfer to see where our proteins land weight wise
- Lastly, we performed a western blot to check their client depletion

Results

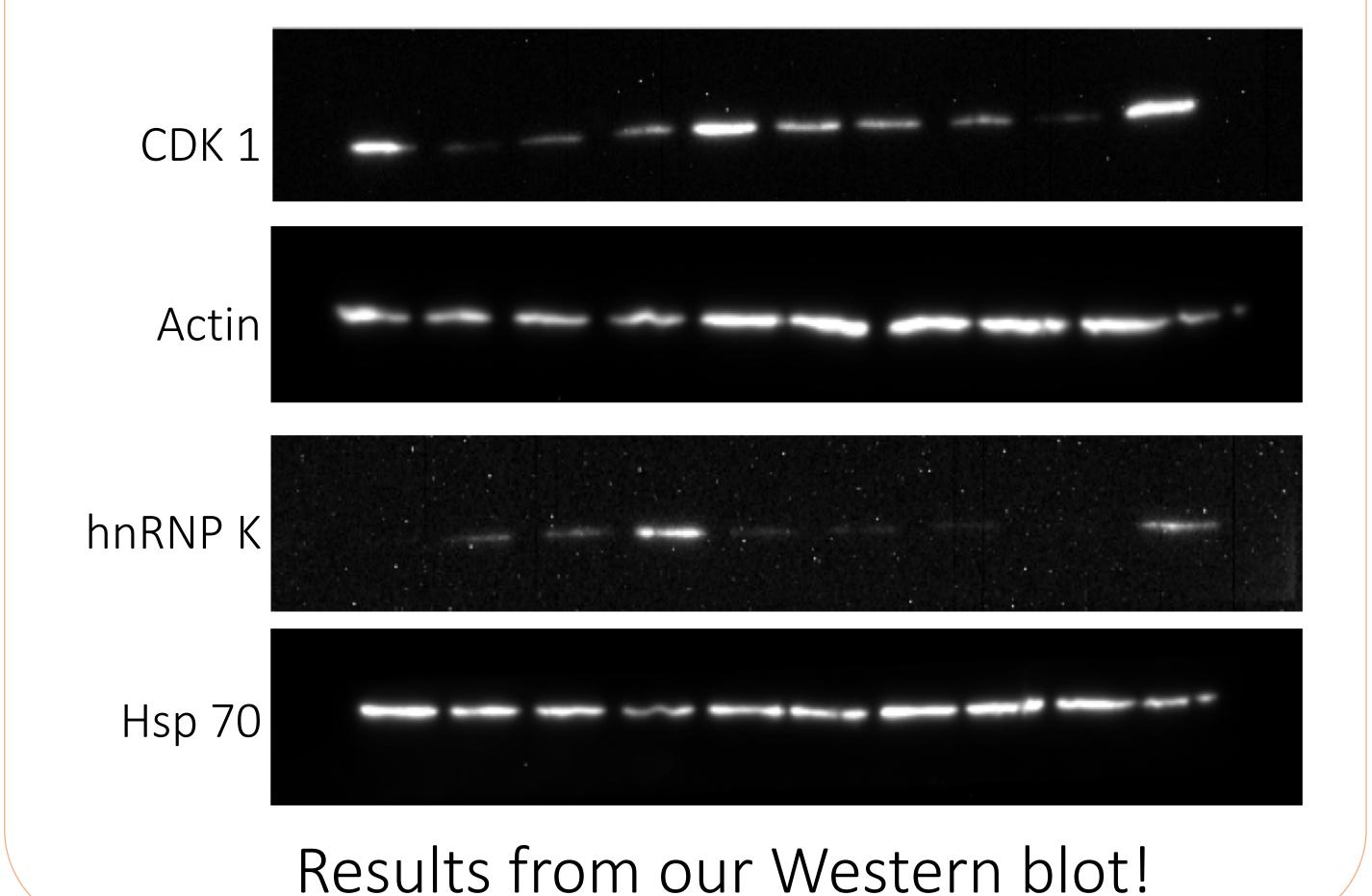


Our plate used for BCA to check protein concentration!



The membranes from our first electrotransfer!

Concentration of Paclitaxel (μM)
DMSO 0.03 0.06 0.15 0.30 0.60 1.20 2.50 5.00 10.0



JUICZ

Culture Jurkat cells Dose cells with Paclitaxel based on dose dependent curve Run BCA to determine protein concentration Use samples to run SDS Page to separate proteins by mass Run electrotransfer using gels Use membranes from electrotransfer to treat with primary and secondary antibodies

Acknowledgments

We would like to extend our gratitude to the entire HHMI institute, LSFRS team, Dr. Steve Hartson, Klaudia Kiel, and Joanna Jurczak.