Resource Summary Report

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Crosslinking Immunoprecipitation Beads

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Proper Citation

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Protocol Information

URL: https://dx.doi.org/10.17504/protocols.io.bdhki34w

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Summary: Immunoprecipitation with non-covalent capture of antibodies is a rapid and effective method for enriching samples with desired antigens. Interference by the antibody in down-stream analysis of intact proteins by mass spectrometry can be eliminated by covalent linkage of antibodies to magnetic beads. While several amine-reactive bifunctional linkers have been used for this application, dimethyl pimelimidate (DMP) are particularly advantageous due to its water-solubility, stability of resulting amidines at low pH, and retention of positive charge at reaction sites. By cross-linking to Protein A/G magnetic beads, a greater portion of antibodies are correctly oriented and able to engage their antigen. Cross-linking antibodies to Protein A/G beads with DMP is a quick and effective method that mitigates interference from heavy and light chain IgG in down-stream mass spectrometry applications.

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