In Situ Proximity Ligation Assay (isPLA)

What is it?

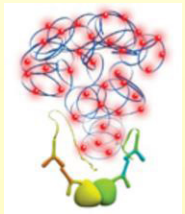
- In situ Proximity Ligation Assay is a technology which allow for detection of proteins, protein modifications and protein:protein interactions in immobilized cells or tissue sections.
- The technique, which was originally developed in the laboratory of Ulf Landegren at Uppsala University and further developed and marketed by Olink Biosciences as DuoLink, relies on the binding of two different antibodies in close proximity. When this pair of antibodies bind to their protein epitopes within a single protein or within a protein:protein complex, they become substrate for a detection method which record this molecular event (the proximity ligation assay) with high specificity and sensitivity.

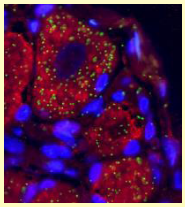
What can it be used for?

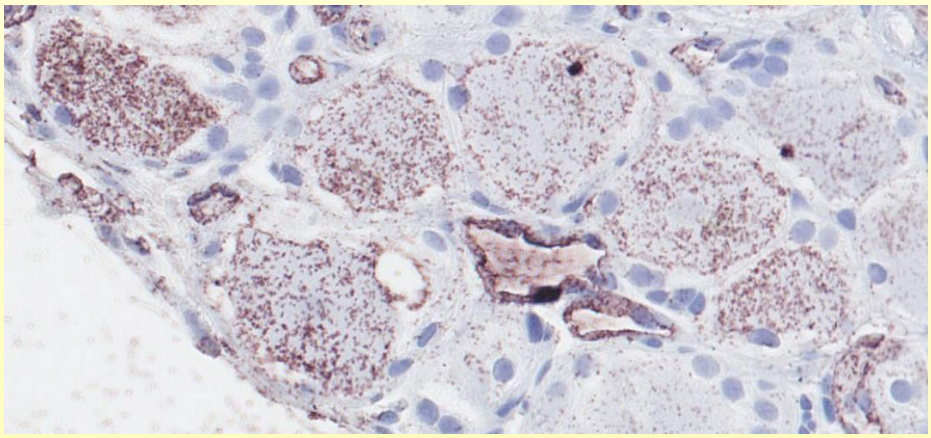
- Validation of antibodies for immunohistochemistry and immunocytochemistry.
- Highly specific analyses of protein expression and distribution in cells and tissues.
- Building target-specific biomarker assays for target engagement studies, recording ligand – triggered protein modifications (eg activity dependent phosphorylations) or protein:protein formations.

Our services

- We have extensive experience designing and executing isPLA-based studies.
- We conduct these analyses using commercial reagents from Sigma. The assays are currently executed in a manual format but we are working on adapting the technique to a semi- and fully automated format for faster deliveries and larger projects.
- We have the skills to multiplex this method with conventional immunohistochemistry to allow for eg. phenotyping the cells that are labelled in the is PLA reaction.
- We can also quantify the results by image analysis, using a software package from Visiopharm.







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