

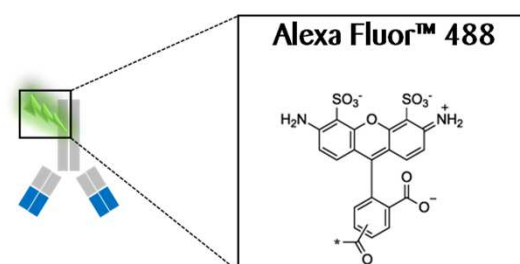
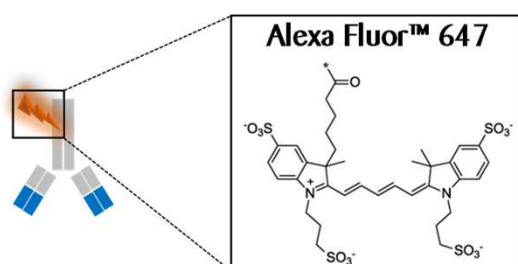
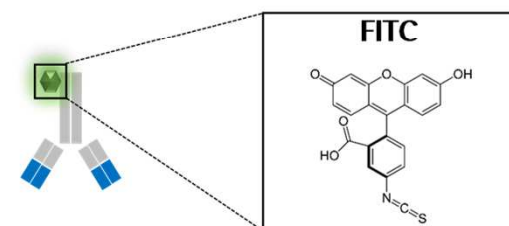
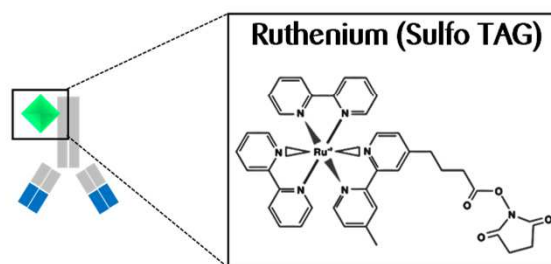
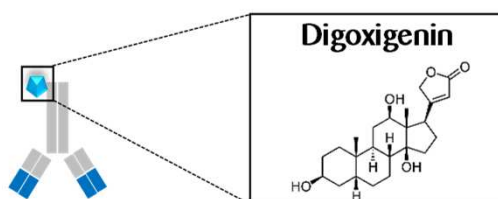
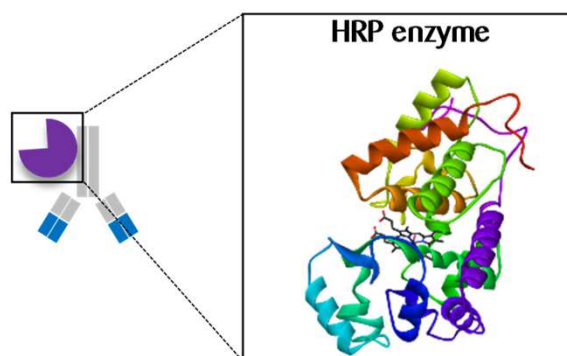
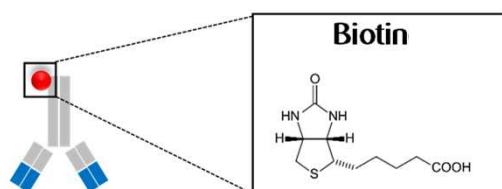
Labelling of Critical Reagents

February 2021

In bioanalysis methods, characterization, monitoring, safety and reproducibility of **your labelled molecule are key points for the success** of your work.
Agro-Bio provides of wide choice of labelling for antibodies, peptides, proteins etc.. to support your project.

Type of labelling

The most common type of labelling used are :

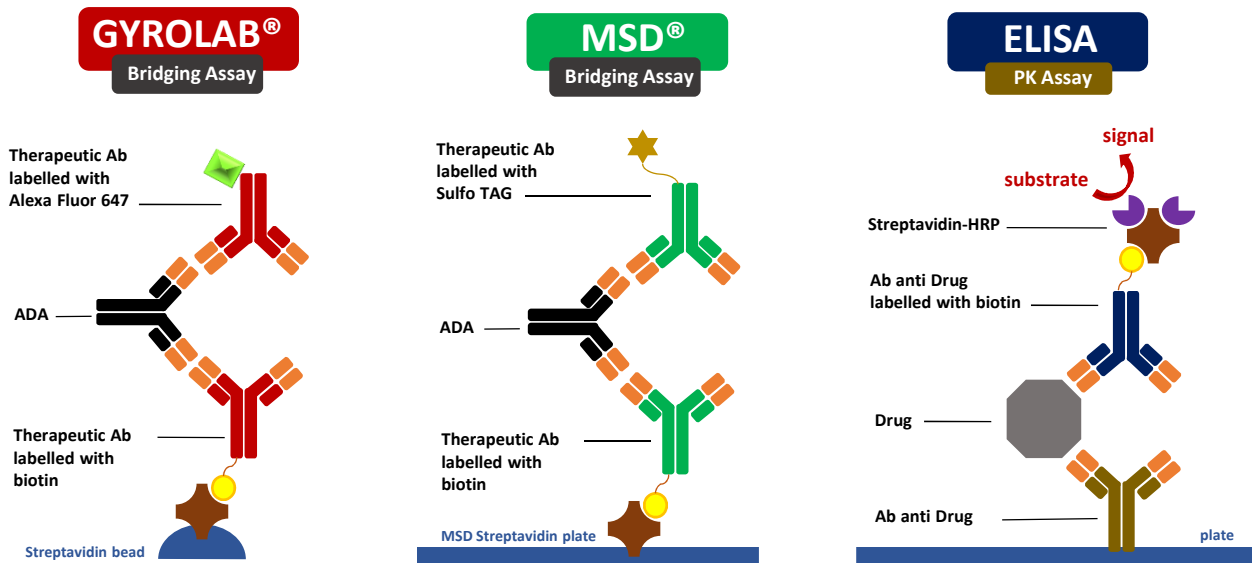


Other types of labelling are also available on request

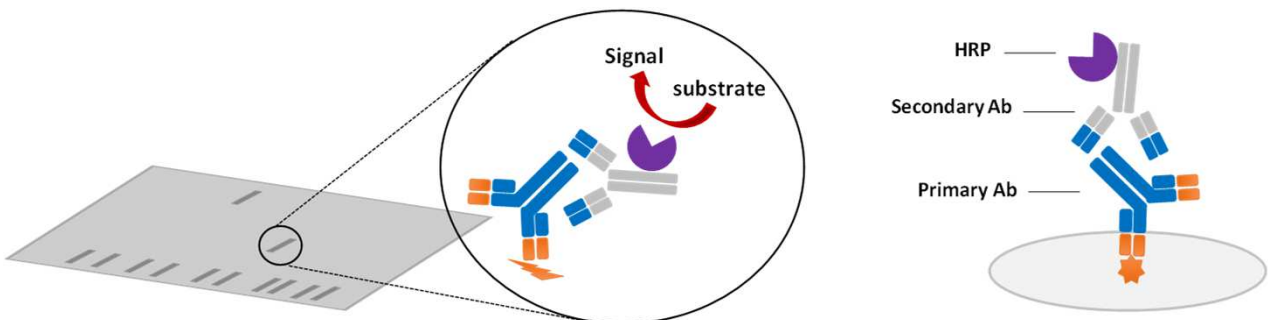
Application

- **ELISA** : Measurement/ detection of a specific protein by using an enzyme which generate a signal
- **Western Blot** : Detection of a specific protein in a sample
- **Flow Cytometry** : Measurement/ determination of cells or biomarkers characteristics
- **Immunohistochemistry (IHC)** : Pharmacodynamic (PD) effects of the drug in vivo, determination of the tissue distribution of an antigen

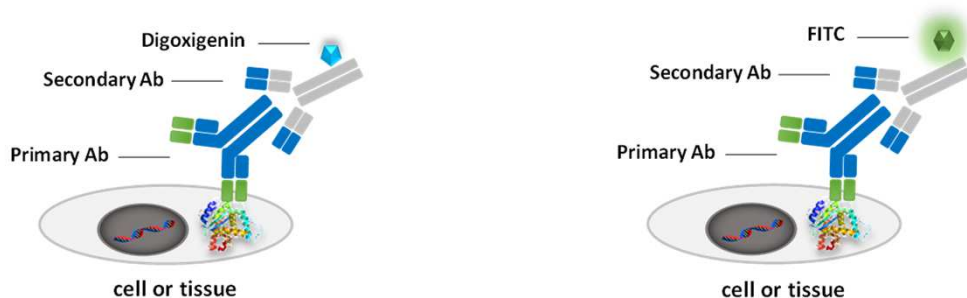
Bioanalysis methods (PK, Immunogenicity, ADA...)



Control methods (Western Blot, Indirect ELISA)



Immunohistochemistry (Tissue Cross-Reactivity)



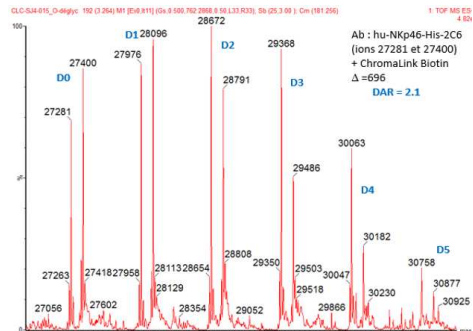
Characterization of labelled reagents

MS Analysis : Determination of the degree of labelling

The Degree of Labelling (DOL) allows to quantify the number of label molecule bind to the molecule of interest.

The DOL is a key setting to control the reproducibility of your labelling

Warning a high DOL value can alter the binding between the molecule of interest and the ligand. This could be checked by Ligand-binding interaction with the BIACORE.

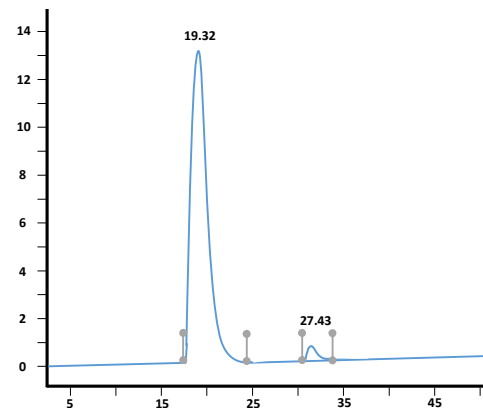


Size Exclusion Chromatography : Purity analysis

SEC analysis have an interest at two different phases of the labeling:

- During the labelling, to separate and collect the labelled molecule (by eliminating the unlabelled molecule of interest and the free label product)
- At the end, as quality control, to determine the aggregation rate and the purity of the labelled product

This is another key parameter of interest setting for the reproducibility of the labelling experiment.



Biacore^{TM200} : Ligand-binding interaction of labelled reagents

Characterization of the molecular interactions :

Biacore^{TM200} is an efficient tool to analytically and functionally characterize critical reagents in order to understand their performance post-modification.

The labeling process may change the binding characteristics of the reagent to its target and degrade its performance. Therefore, Surface Plasmonic Resonance (SPR) biosensor is used to evaluate the impact of the labelling process on reagent-binding kinetics and affinity for a specific target; association and dissociation rates of the labelled reagent binding to its target.

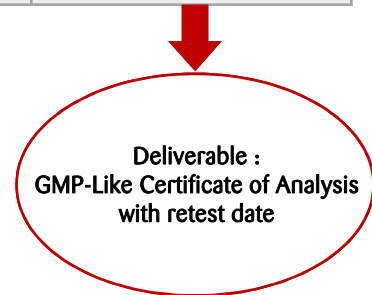
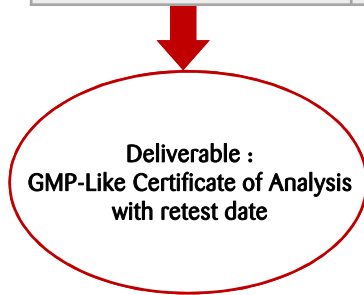
- Measurement of the affinity constant
- Analysis (comparison) of the binding of nude/labelled reagent to its target



Life cycle management



Characterization	Secure Storage	Re-test
UV spectrophotometry SDS PAGE SEC MS analysis Biacore™200	T0+1 year T0+2 years T0+3 years ...	UV spectrophotometry SDS PAGE SEC MS analysis Biacore™200



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