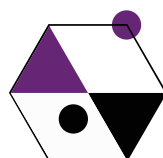


Bioconjugation

Technologies and Services



Innova Biosciences

About us

Innova Biosciences are world leading experts in easy-to-use, cutting-edge bioconjugation technologies and services. We have the flexibility to support scientists from academia through to commercial manufacturing, developing and supplying reagent products to make science easier, both off-the shelf and to customer specification. Our products are based on our antibody and protein labeling, nanoparticle, oligonucleotide labeling, and phosphate detection enzyme activity assay technologies.

All of our product ranges are of the highest quality and are designed to streamline R&D and manufacturing processes, whilst also reducing overall project costs by cutting costs associated with material waste, in-house equipment and staff time, providing increased return on investment compared to traditional methods. Our ever expanding portfolio includes the Lightning-Link®, InnovaCoat® and Thunder-Link® PLUS brands.

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Antibody and protein labeling kits

Lightning-Link®

Lightning-Link® is the world's fastest, easiest to use and most efficient antibody conjugation method, offering antibody and protein labeling with only 30 seconds hands-on time and no separation steps.

- Directly label primary antibodies – no need for secondaries!
- Quick and easy-to-use – no specialist knowledge required
- No separation steps so 100% antibody recovery
- Consistent high quality, excellent batch-to-batch reproducibility
- Fully scalable for easy transfer from R&D to manufacturing
- Over 40 available labels using same chemistry



“ Like many other small diagnostics companies we have used our own HRP activation and conjugation techniques for some years. However, on trying Innova's Lightning-Link® kit we found its simplicity and the high level of functionality of the conjugates produced to be significantly better.

We have since tried another, similar kit but the resulting product was decidedly inferior, with lower signal and higher noise. We plan to continue using Lightning-Link® for our existing ELISAs and also for others to be added to our food testing range in the next few years.

Chief Executive at Bio-Check (UK) Limited



















































































”

Custom services

We offer a range of custom antibody and protein labeling services, performed by our highly skilled conjugation scientists and tailored to your needs and specifications.

We can provide you with the expertise needed to help streamline assay development and improve manufacturing. We will work alongside and support you at any stage of your journey, from initial consultation, through to conjugate optimization, scale-up to commercial manufacturing volumes as well as work with our trusted partner network to assist with your assay development. For more information regarding our custom services see page 18.

Fluorescent dyes and proteins

Fluorescent Label	Maximal Absorbance (nm)	Excitation colour	Suggested Excitation Laser Line (nm)	Maximal Emission (nm)	Emission Color
AMCA	352		355	452	
DyLight® 350	354		355	432	
Atto 390	388		405	468	
DyLight® 405	402		405	428	
PerCP	484		488	678	
PerCP/Cy5.5	484		488	692	
DyLight® 488	496		488	524	
Fluorescein	498		488	532	
R-Phycoerythrin	498, 544, 566†	  	488, 532, 561	580	
PE/Texas Red®	498, 544, 566†	  	488, 532, 561	618	
PE/Atto594	498, 544, 566†	  	488, 532, 561	632	
PE/Cy5	498, 544, 566†	  	488, 532, 561	672	
PE/Cy5.5	498, 544, 566†	  	488, 532, 561	700	
PE/Cy7	498, 544, 566†	  	488, 532, 561	782	
Atto488	504		488	530	
B-Phycoerythrin	546		561	580	
Cyanine Dye 3	552		561	576	
Rhodamine	555		561	588	
DyLight® 550	556		561	584	
Atto 565	570		561	598	
DyLight® 594	594		561*	629	
Texas Red®	596		561*	616	
DyLight® 633	628		633, 635, 640	660	
Atto 633	634		633, 635, 640	660	
FluoProbes647H	650		633, 635, 640	684	
Cyanine Dye 5	652		633, 635, 640	678	
Allophycocyanin	652		633, 635, 640	666	
APC/Cy5.5	652		633, 635, 640	700	
APC/Cy7	652		633, 635, 640	790	
DyLight® 650	656		633, 635, 640	686	
Cyanine Dye 5.5	680		640*	705	
DyLight® 680	686		640*	716	
Atto700	704		640*	724	
DyLight® 755	756		750	794	
DyLight® 800	776		750	798	

† (R-)PE has three maxima, and all can be used. The optimal will depend on the application

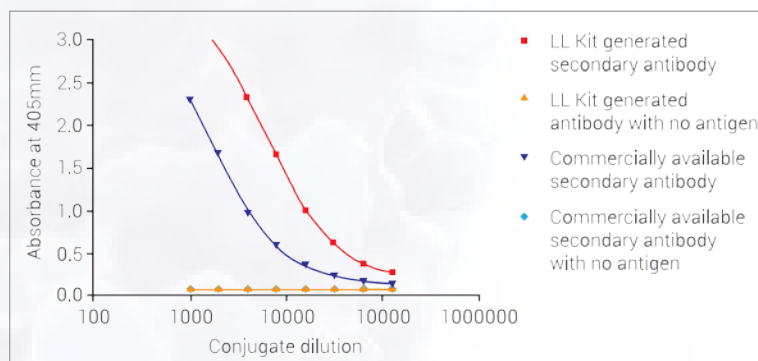
* This Laser Line is some distance from the Maximal Absorbance, so performance will be compromised if this dye is used with the suggested Laser Line.

Other labels available:

- Horseradish Peroxidase
- Alkaline Phosphatase
- Glucose Oxidase
- Biotin and Streptavidin

ELISA data - direct vs indirect labeling

Alkaline Phosphatase anti-Human IgG (Fc) conjugates analyzed by ELISA

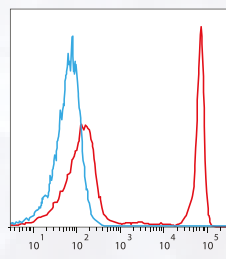
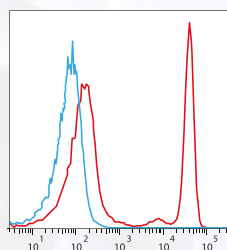


Anti-human IgG monoclonal antibody was purchased pre-conjugated to alkaline phosphatase from a commercial supplier. The same antibody was purchased in unconjugated form and then conjugated to alkaline phosphatase using a Lightning-Link® kit. The Lightning-Link® conjugate demonstrates enhanced titre and sensitivity.

Flow cytometry data - Lightning-Link® vs ready conjugated antibody

Lightning-Link® R-PE conjugation

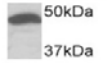
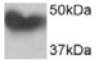
Ready conjugated to R-PE



A mouse monoclonal antibody (RPA-T4 clone) specific for CD4 was purchased from a commercial source in both unconjugated and ready conjugated formats. The unconjugated antibodies were linked to R-PE using a Lightning-Link® kit, and the conjugates were compared in flow cytometry staining of human peripheral blood lymphocytes. The blue curve shows unstained cells.

Western blot data

Direct vs indirect labeling

	conjugated	unconjugated
primary antibody	Goat Anti-GFAP	Goat Anti-GFAP
target	GFAP	GFAP
sample lysate	mouse brain	mouse brain
primary antibody working concentration	0.185 µg/ml	0.5 µg/ml
secondary antibody used	no (direct conjugation)	yes
exposure time (min)	3	3
primary antibody source	Everest Biotech, Cat no: E807478	
western blot analysis		

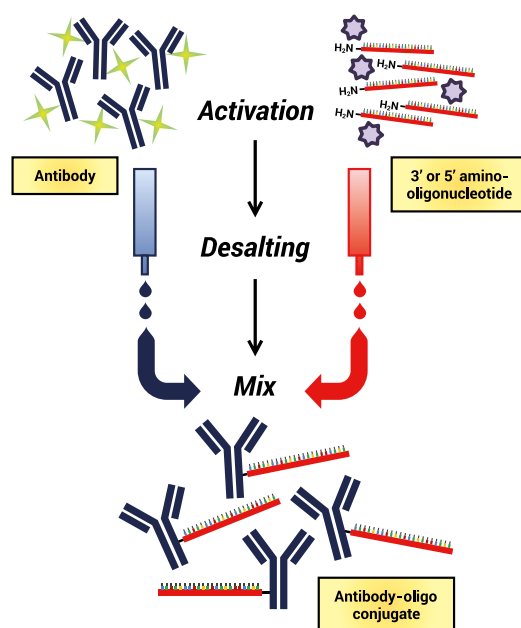
Primary antibody directly conjugated to HRP using Lightning-Link® shows enhanced sensitivity in Western blotting compared to the traditional indirect technique.

Oligonucleotide labeling kits

Thunder-Link® PLUS

The Thunder-Link® PLUS oligonucleotide conjugation kits enable the simple and rapid conjugation of antibodies to oligonucleotides. The kits are quick and easy to use, overcoming time consuming and lengthy protocols associated with standard conjugation methods.

- Quick and easy to use - save time, no specialist knowledge required
- Fast oligo conjugation - only 1 hour!
- Suitable for single-stranded oligos of 10-120 bases, double-stranded oligos up to 80 base pairs
- High antibody and oligo recovery - save precious reagents
- Stringently QC tested - consistent high quality, excellent batch-to-batch reproducibility
- Post-conjugation clean-up step - no interference from unbound oligo
- Unidirectional chemistry - no risk of cross-linking
- Robust and flexible clean-up procedure
- Works with antibody fragments and other proteins



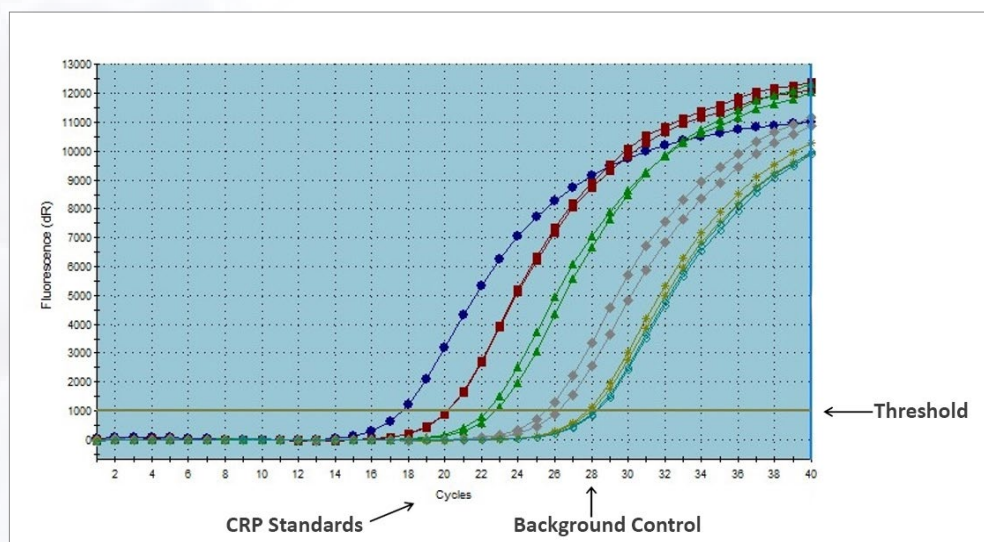
The Thunder-Link® PLUS conjugation process

Custom services

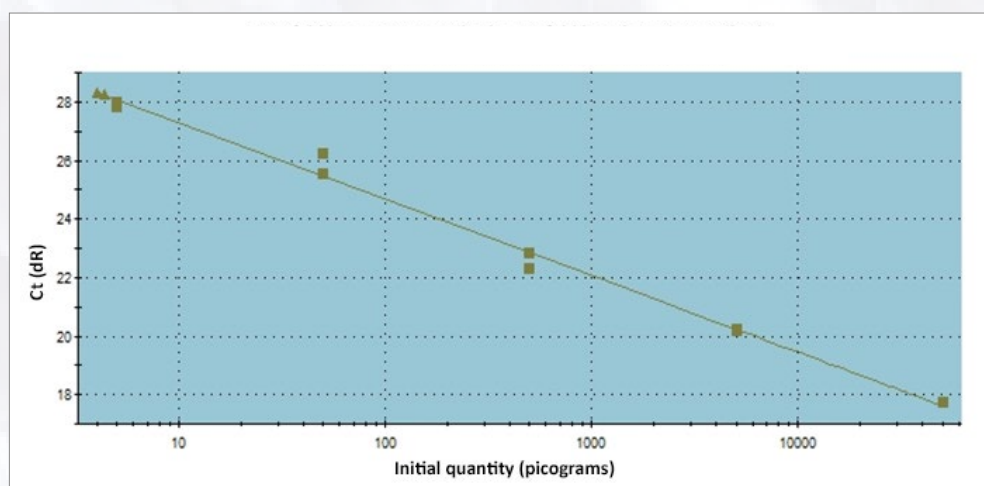
We can provide you with the expertise needed to help streamline assay development and improve manufacturing. We will work alongside and support you at any stage of your journey, from initial consultation, through to conjugate optimization, scale-up to commercial manufacturing volumes as well as work with our trusted partner network to assist with your assay development.

For more information regarding our custom services see page 18.

Immuno-qPCR data prepared with Thunder-Link® kit



1000-fold less capture antibody, 100 fold less detection antibody and 1000x more sensitive than equivalent ELISA



A mouse monoclonal antibody specific for human CRP (clone C7) was purchased in unconjugated format from HyTest. The unconjugated antibody was conjugated to an oligonucleotide using a Thunder-Link® kit, and was used as detection antibody in a sandwich Immuno-PCR assay using a polyclonal anti-CRP antibody as capture reagent.

The top graph plots the number of qPCR cycles undertaken vs. fluorescence intensity generated by SYBR green containing qPCR probes at particular antigen concentrations. The bottom graph then converts this data to antigen amount vs cycle number to enable calculation of a standard curve.

The results show that the assay utilizes 1000-fold less capture antibody, 100 fold less detection antibody and provides 1000-fold more sensitivity than the equivalent ELISA.

Colloidal gold

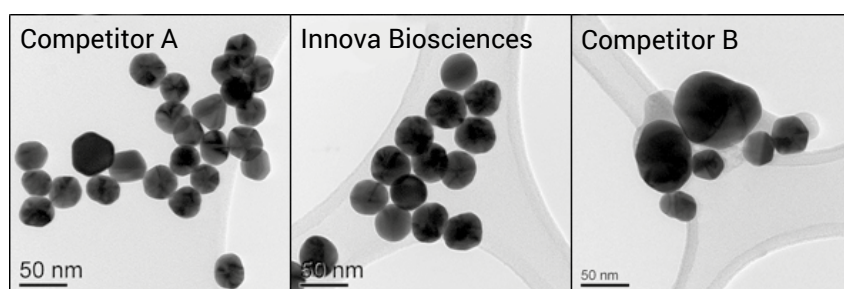
Ultra-high quality gold nanoparticles

Innova Biosciences' colloidal gold is developed using specialized techniques that enable the production of extremely uniform spherical particles with a very narrow size distribution, minimizing variability within your assay.

Using our proprietary production protocols we can very quickly produce large quantities of gold nanoparticles at low cost, without compromising on quality. Get in touch for more information on bulk orders.

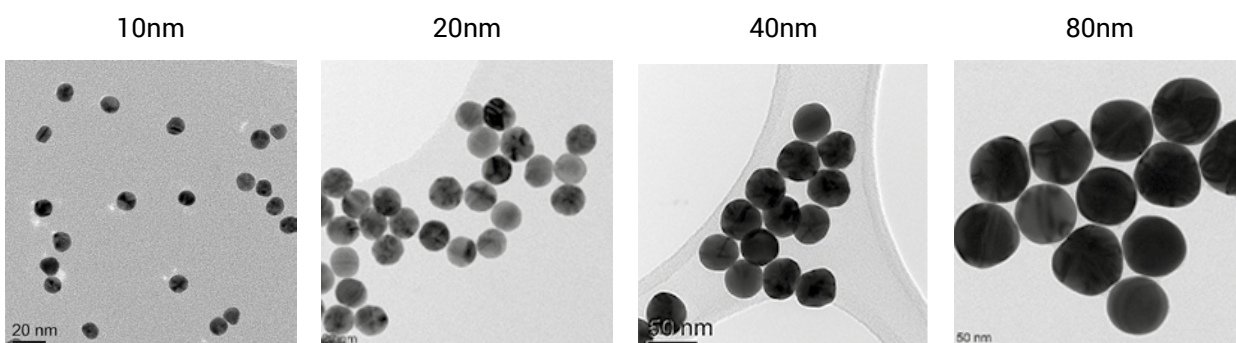
- Uniform spherical shape
- Narrow size distribution
- Ultra-high quality
- Batch-to-batch consistency
- Available at high concentrations to simplify assay development
- Particles are buffer exchanged post manufacture to ensure consistent formulation
- Available in bulk quantities

Our production process allows particularly tight control of shape, completely preventing the formation of irregular structures seen in all other commercial products.



Transmission electron microscopy of commercially available gold particles. Note that the Innova particles (middle) have the most regular shape and consistent size.

Our colloidal gold is available in various sizes, concentrations and volumes for maximum flexibility.

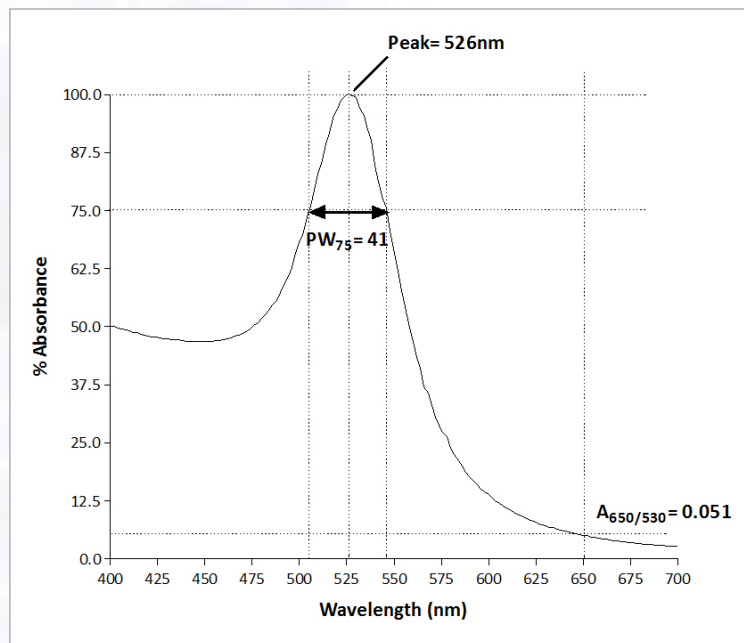


Our colloidal gold nanoparticles are suspended in citrate buffer and they are suitable for:

- Protein adsorption
- Oligonucleotide adsorption
- Surface modifications

Passive vs covalent conjugation

Quality assessment of Innova Biosciences' 40nm gold particles



Absorbance Scan

Peak position: 524-528nm

Peak width (PW₇₅): <43

A_{650/530} ratio: <0.1

TEM analysis (~200 particles)

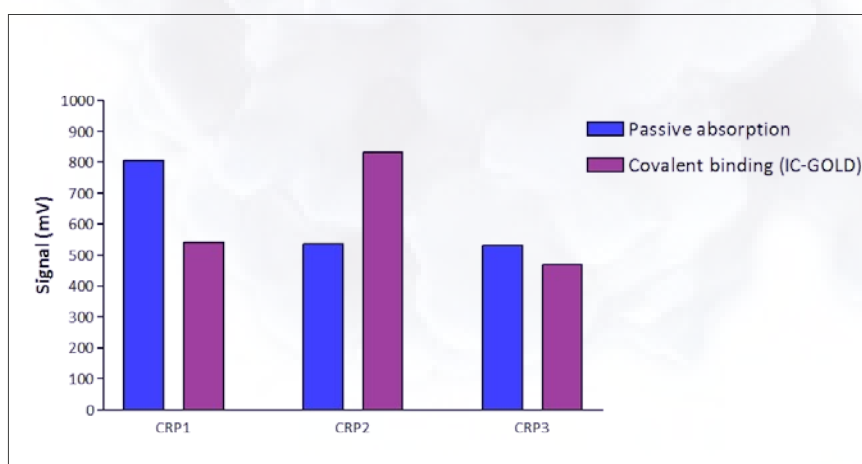
Particle diameter: 40nm ±4nm

Standard deviation: <4nm

%CV <10%

Complementary approaches for making conjugates

Antibodies may be attached to coated gold nanoparticles using simple covalent conjugation technologies or with traditional passive techniques.



Three CRP antibodies each conjugated using covalent and passive conjugation methods.

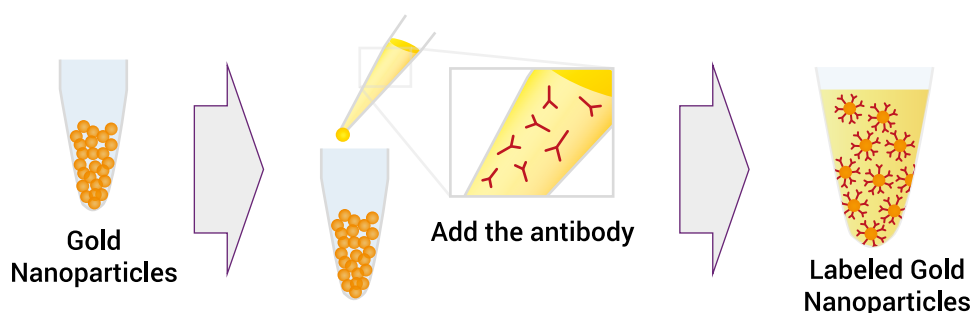
Each monoclonal antibody is unique and it is important to have a range of options for making nanoparticle conjugates to achieve the best possible performance in diagnostic assays.

Gold nanoparticle conjugation kits

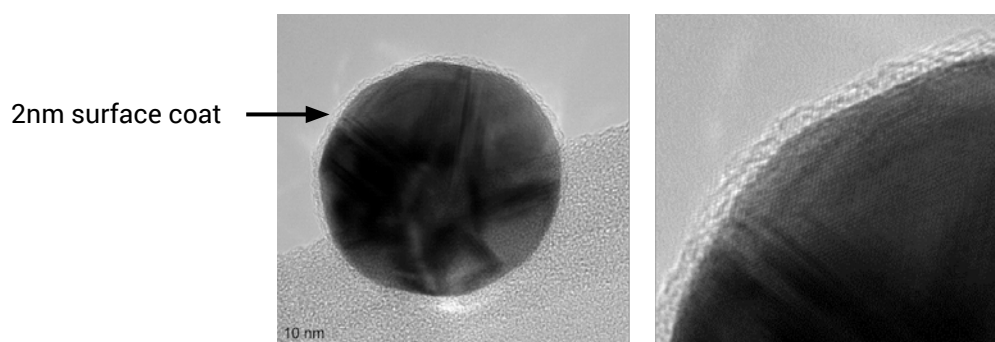
InnovaCoat® GOLD

InnovaCoat® GOLD nanoparticle conjugation kits enable the easy conjugation of gold nanoparticles to antibodies or proteins for use in R&D applications and for the development and manufacture of diagnostic kits. The technology enables the covalent attachment of gold nanoparticles to antibodies, proteins or any other biomolecule with an available amine group, and can be beneficial when passive conjugation of a specific antibody is an issue, or for labeling small molecules.

- Generate antibody-gold conjugates in 20 minutes
- Proprietary surface coat forms ultra-stable conjugates
- Fully scalable - easy transfer from R&D to manufacturing
- Consistent high quality, excellent batch-to-batch reproducibility
- Different nanoparticle sizes, concentrations and chemistries available

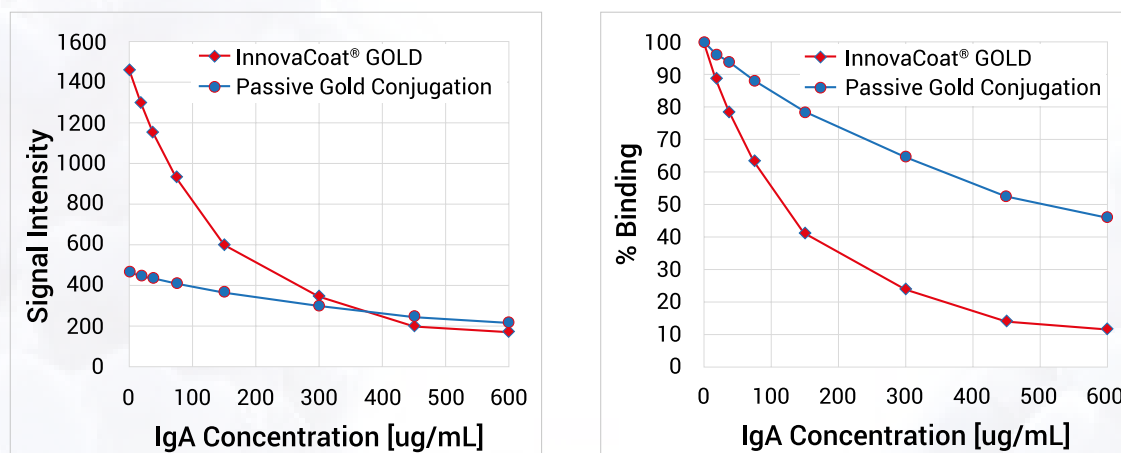


The gold nanoparticles within the kits have a proprietary surface coating which covalently binds the antibody or protein forming highly stable conjugates. This unique surface coating also completely shields the metallic core of the nanoparticle from the external environment, eliminating colloidal instability.



Resistance to 2.5M NaOH at 70°C for 90 minutes (competitor materials <1 second)

Lateral flow data - InnovaCoat® GOLD vs traditional techniques



Antibody conjugation using InnovaCoat® GOLD vs traditional passive conjugation techniques with uncoated gold nanoparticles, showing both enhanced signal intensity and improved specificity. 40nm gold particles were labeled with anti-IgA antibody, and used to measure IgA concentration in a lateral flow inhibition assay, with IgA bound to a lateral flow strip.

“ Having made our own passively adsorbed antibody-coated gold colloid for some years then more recently moving to a high OD, no-spin method, we were a little reluctant to try out another method quite so soon. However the extreme simplicity and rapidity of the InnovaCoat® GOLD covalent conjugation, combined with the excellent functionality and consistency of the final product greatly helped us make the change. We now use less colloid per test in a demanding, room temperature stored, liquid formulation and are finding the development of new rapid tests to be significantly easier. ”

Phil Goodwin, UK Biotechnology Professional

Custom services

We can provide you with the expertise needed to help streamline assay development and improve manufacturing. We will work alongside and support you at any stage of your journey, from initial consultation, through to conjugate optimization, scale-up to commercial manufacturing volumes as well as work with our trusted partner network to assist with your assay development.

For more information regarding our custom services see page 18.

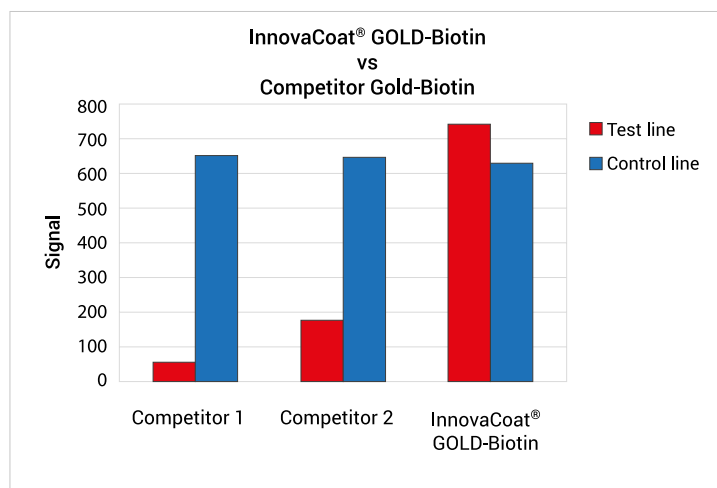
Gold nanoparticle conjugates

InnovaCoat® GOLD

Our gold nanoparticle conjugates are manufactured using our InnovaCoat® GOLD nanoparticles which have a proprietary surface coat that covalently binds the detection protein providing highly stable conjugates.

Available gold nanoparticle conjugates:

	10nm	20nm	40nm	80nm	Target Group
InnovaCoat® GOLD Streptavidin		•	•		Biotin
InnovaCoat® GOLD Biotin			•		Streptavidin
InnovaCoat® GOLD Goat Anti-Mouse	•	•	•	•	Mouse IgG
InnovaCoat® GOLD Goat Anti-Rabbit	•	•	•	•	Rabbit IgG
InnovaCoat® GOLD Protein A		•	•		IgG
InnovaCoat® GOLD Protein G		•	•		IgG

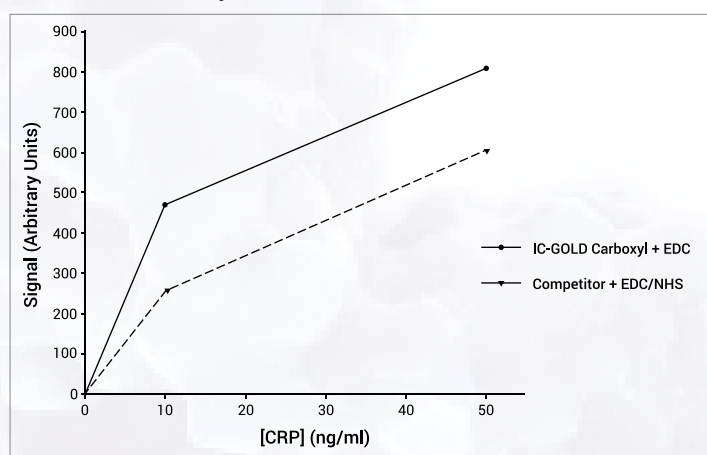


Comparison of test and control line signal intensities between biotin conjugated gold nanoparticles from Competitor 1 or 2 and covalently conjugated InnovaCoat® GOLD-Biotin on lateral flow test strips

InnovaCoat® GOLD alternative chemistries

InnovaCoat® GOLD-Carboxyl

InnovaCoat® GOLD-Carboxyl nanoparticles are coated gold nanoparticles functionalized with carboxyl groups that allow the covalent conjugation of antibodies, using the water soluble carbodiimide crosslinker EDC. Unlike traditional EDC/NHS coupling used to activate carboxyl groups, InnovaCoat® GOLD-Carboxyl nanoparticles are optimized for single step EDC covalent coupling without aggregation. This eliminates the usual EDC/NHS preactivation and washing steps. This process dramatically speeds up the labeling process so that conjugates are ready to use in less than 35 minutes. InnovaCoat® GOLD-Carboxyl nanoparticles have a narrow size distribution, a uniform spherical shape and high batch-to-batch consistency.

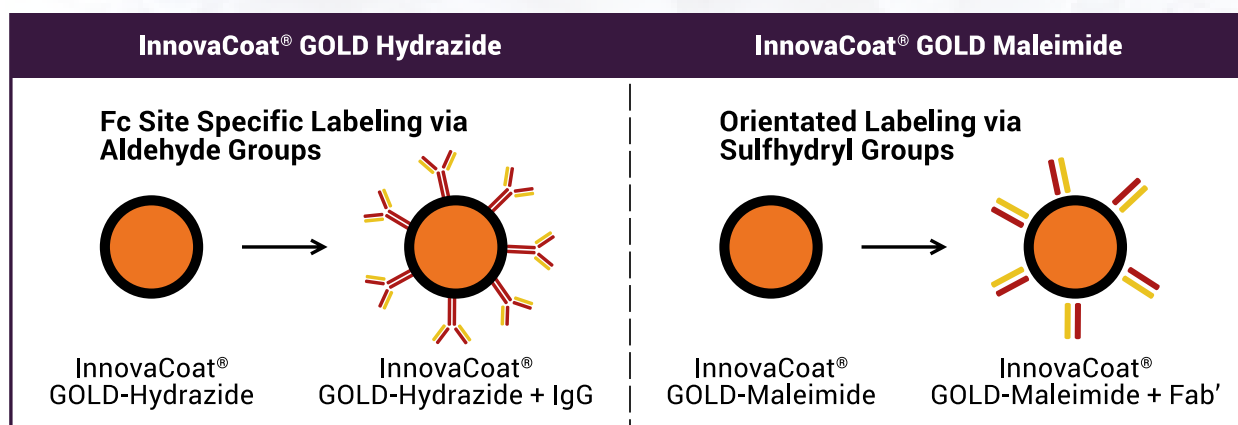


Lateral flow assay comparing the sensitivity of 40nm InnovaCoat® GOLD-Carboxyl nanoparticles to a competitor's 40nm carboxyl gold. The gold nanoparticles were conjugated to a monoclonal anti-CRP antibody (a 1-step reaction with EDC taking just 35 minutes for InnovaCoat® GOLD and demonstrating no aggregation; a 2-step EDC/NHS reaction taking 3-5 hours for the competitor and requiring significant optimization to prevent aggregation).

InnovaCoat® GOLD-Maleimide & Hydrazide

As the InnovaCoat® surface is firmly anchored to the gold nanoparticle and is resistant to extreme conditions, it is therefore very easy to introduce derivatives of the main technology.

Catalogue products include InnovaCoat® GOLD-Maleimide, which is perfect for coupling small thiolated antibody fragments. Such fragments tend to denature on bare metal but are afforded protection on the more favorable InnovaCoat® surface. The Hydrazide gold derivative may be used for orientated coupling of periodate-treated antibodies.



LATEX conjugation kits

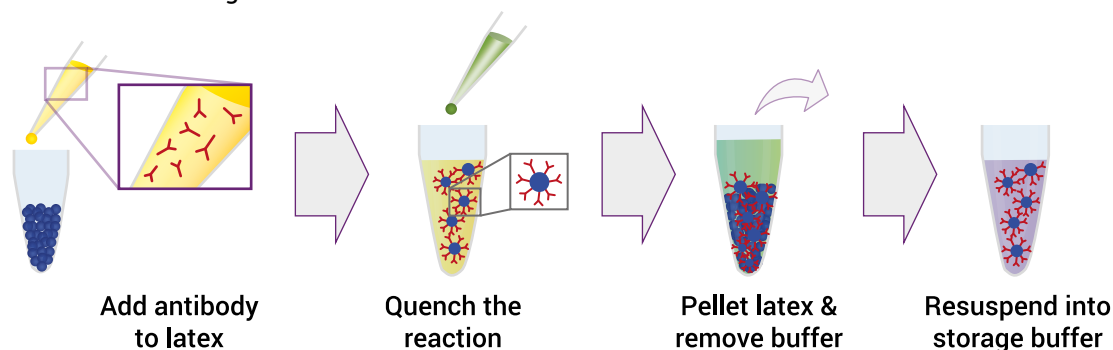
Our LATEX bead conjugation kits are one-step kits for covalently conjugating antibodies, proteins and peptides (or any other biomolecule with an amine group) to specially treated latex beads without the need for extensive optimization.

- Quick and easy to use - conjugates ready to use in 35 minutes
- Our latex is specially treated and resistant to aggregation
- No extensive pH optimizations required
- Different colors available – allows multiplexing
- Fully scalable for easy transfer from R&D to manufacturing

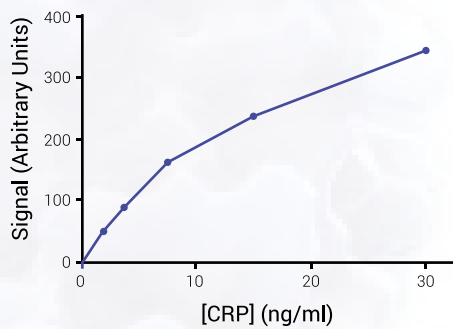


The researcher simply pipettes the antibody into the vial of lyophilized latex and incubates the reaction for 15 minutes. After quenching the reaction, the researcher pellets the latex and removes the buffer. Now the antibody is ready to be resuspended in the storage buffer. The entire procedure takes 3 minutes hands-on time and 35 minutes total time until the conjugates are ready to use.

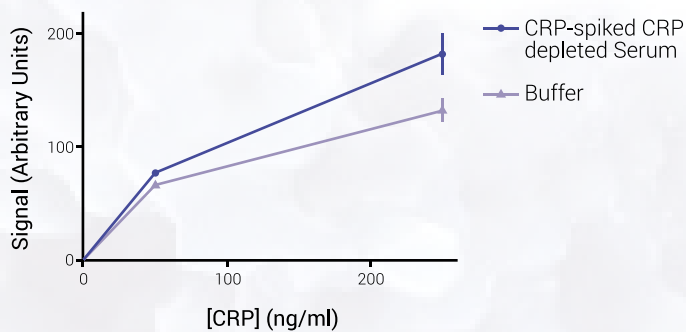
High yields of functional conjugates can be made without the need for harsh resuspension methods like sonication and vortexing!



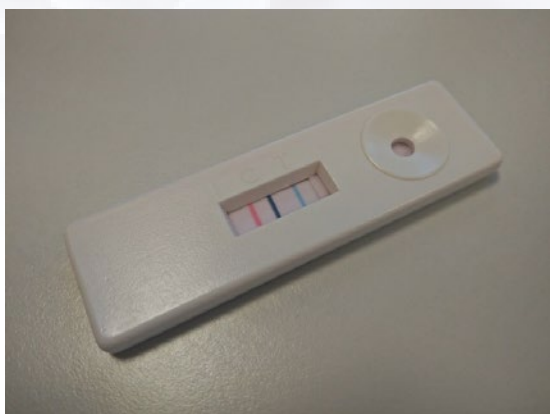
Lateral flow data



Lateral Flow Assay of our specially-treated latex beads conjugated to a monoclonal anti-CRP antibody (mAb 1) titrated against CRP. 2 ng/ml CRP can easily be detected.



Lateral Flow Assay of our specially-treated latex beads conjugated to a monoclonal anti-CRP antibody (mAb 2) titrated against CRP in buffer or CRP spiked CRP-depleted serum (100 % serum). The latex behaves similarly in serum and buffer, and no aggregation or non-specific binding is seen.



Multiplexed Latex. Three colors of latex each conjugated to a different antibody or protein and forming a line either by a direct binding event (red and black latex) or a sandwich assay binding event (blue latex). The three colors of latex demonstrate no aggregation or background staining.

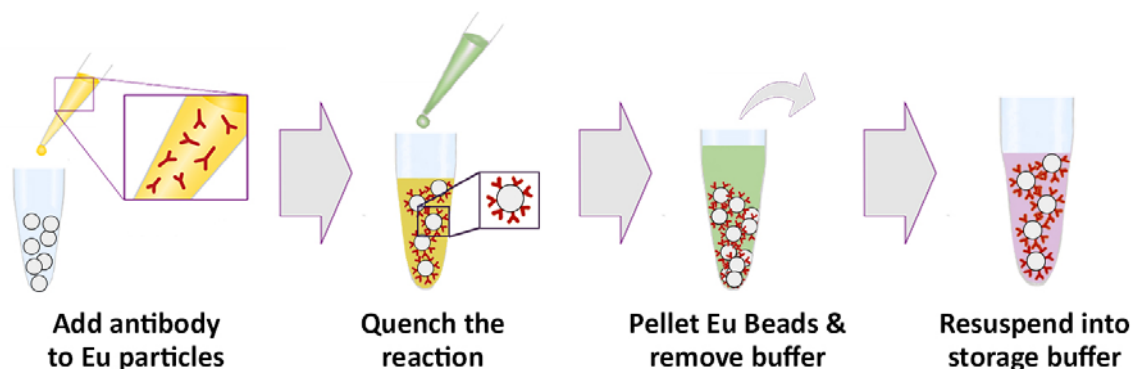
EUROPIUM conjugation kits

The Innova Biosciences EUROPIUM Conjugation Kit significantly simplifies the conjugation of antibodies and proteins to 200nm europium (Eu) particles.

The europium beads have a specially treated surface coat which covalently binds antibodies and proteins, generating highly stable conjugates that are resistant to aggregation.

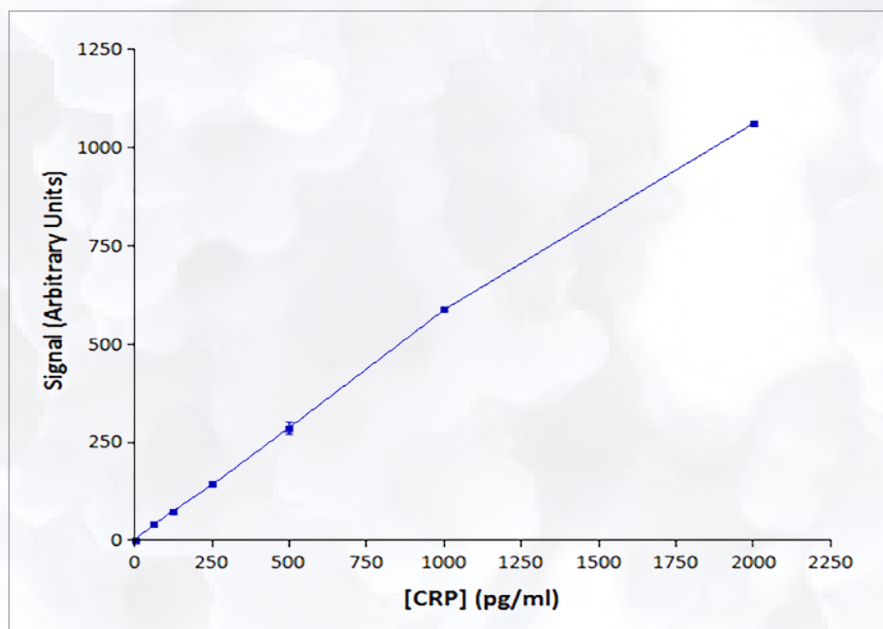
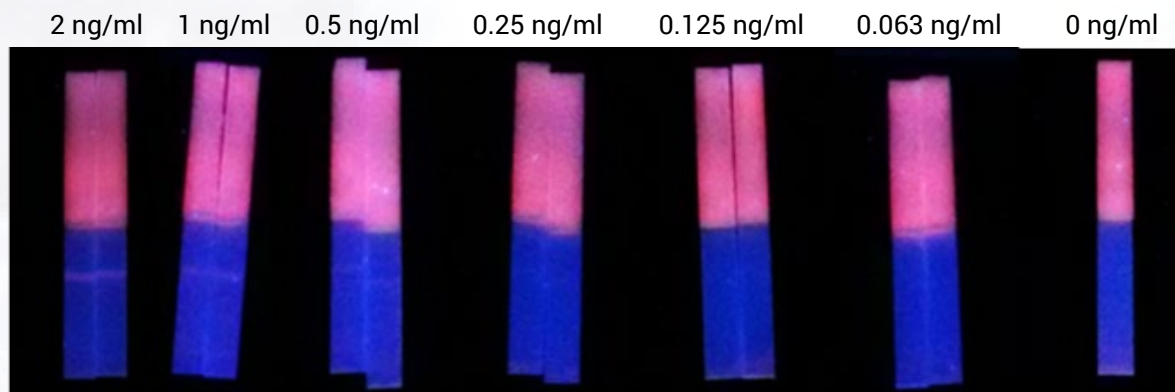
- Unique product - conjugates can be run on an immunochromatographic assay* as well as a microwell-based assay
- 15-fold higher sensitivity compared with other common particles
- Generation of stable conjugates
- Resistant to aggregation
- No harsh resuspension methods required
- Conjugates ready to use in 35 minutes
- Fully scalable for easy transfer from R&D to manufacturing

*Detection of europium conjugates in a lateral flow assay will require either a fluorescence strip reader or an UV transilluminator.



The europium particles are supplied freeze dried. The conjugation reaction is initiated simply by reconstituting the lyophilized mixture with your antibody. The antibody is then covalently bound (via lysine residues) to the proprietary surface on the europium nanoparticles.

Europium beads conjugated to a monoclonal anti-CRP antibody



Typical results obtained from a UV transilluminator (top) and a fluorescence reader (bottom), showing europium conjugated to a monoclonal anti CRP antibody. The conjugate is easily able to detect as little as 63pg/ml CRP, in part due to the low background and lack of aggregation.

Custom services

We recognize that sometimes you might need something a bit different or time restraints mean that outsourcing your complex or bulk conjugations can be a more effective solution.

That's why we offer a range of custom antibody and protein labeling services, performed by our highly skilled conjugation scientists and tailored to your needs and specifications.

We can provide you with the expertise needed to help streamline assay development and improve manufacturing. We will work alongside and support you at any stage of your journey, from initial consultation, through to conjugate optimization, scale-up to commercial manufacturing volumes as well as work with our trusted partner network to assist with your assay development.

Innova Biosciences is committed to working with you to develop a long term mutually beneficial & commercially successful relationship.

Consultation

Consultation

Set up a consultation with one of our expert in-house conjugation scientists to discuss your requirements. Whether it be a complex conjugation or you are looking to simplify your assay development, enhance assay performance, and reduce your manufacturing costs, we are ready to advise!

Micro-optimization

Micro-Optimization

Even a small or medium increase in conjugate performance can translate into a large cost saving. Our unique micro-optimization service is a fast and efficient way to optimize your conjugates, using mild conjugation conditions and very small quantities of your materials.

Our experienced conjugation scientists use a combination of conjugation techniques, many of which are unique to Innova, to generate a range of different conjugates for you to test in your chosen application and up-scale for future requirements. Your chosen formulation can be optimized further or scaled-up to suit your R&D or manufacturing needs.

Bulk ordering

Bulk Services

We can supply all of our products in quantities to suit your research and manufacturing needs. Our bulk products have the same high level of performance and quality as our standard catalogue products only on a larger scale.

Conjugation services

Conjugation services

Looking to conjugate something unusual? Struggling to find the time to produce high quality conjugates? Outsourcing your conjugation can be the most effective solution. Our conjugation service is performed in-house by our expert conjugation scientists, providing you with your required conjugate at your agreed conjugation ratio and scale.



Lateral flow
assay
development

Lateral Flow Assay Development

Innova has a wealth of in-house expertise that can take your assay development from initial idea, through to R&D and then transfer to trusted partners for bulk manufacturing.

This full service is a multi-step project providing you with different options, from proof of principle LFA using a dipstick (with either spots or lines on the nitrocellulose membrane), to full strips with lines (or spots), sample pad, conjugate pad and absorbent pad and small scale commercial manufacture.

Batch
reservation

Batch validation and reservation

All our products are manufactured to the highest possible standards and quality checked to stringent parameters to provide consistent performance. We understand that sometimes you might need to retain the same reagent lot throughout your project. Our inventory control service gives you the opportunity to reserve a specific batch of your choice, at quantities to suit your requirements.

Custom pack
sizes

Custom Pack sizes

Interested in one of our products but need a different size? Our highly skilled manufacturing team can provide you with your very own bespoke pack size, ideal for those customers who need to perform large scale streamlined conjugations on a regular basis.

Antibody
fragmentation

Antibody Fragmentation

Fragmentation of antibodies requires a significant amount of expertise and is technically challenging. To complement our bioconjugation technologies, Innova Biosciences provides antibody fragmentation services to meet a diverse set of customer needs.

Our range of services isn't limited to the above, we also provide freeze-drying services, stability testing, and more. Get in touch to find out more at info@innovabiosciences.com.

Accessory products

Purification kits

Commercially available antibodies often contain substances (e.g. BSA, glycine, tris, and azide) that interfere with labeling reactions.

We have developed a range of purification kits which allow for easy and rapid purification of antibodies from any buffer formulation, and which complement our Lightning-Link®, Thunder-Link® PLUS, InnovaCoat® and LATEX conjugation kits.

The range also includes products for antibody purification from tissue culture supernatant (TCS), serum and ascites fluid; for concentration of antibodies and proteins; and for performing buffer exchanges.

- Purified antibody compatible with our conjugation kits (no dialysis required)
- Multiple species including mouse and rat specific kits
- High recovery (~80-90%)
- Easy-to-use
- All components included
- Scale-up available

Our range of purification kits can be used to:

- Concentrate antibodies and other proteins
- Exchange your buffer (pH, salt concentration)
- Remove buffer additives including:
 - BSA
 - Sodium Azide
 - Gelatin
 - Glycine
 - Tris

Immunogen Kits

Our Imm-Link™ immunogen kits allow the conjugation of your hapten to BSA, KLH or Ovalbumin. Simply add a solution of the hapten to a lyophilized mixture containing the carrier protein and the required conjugation chemistry.

There are three different chemistries available - carboxyl, sulfhydryl and amine - perfect for preparing antigens for immunization.

Conjugate Check&Go! Kit

The Innova Biosciences Conjugate Check&Go! kit allows scientists to confirm the success of their antibody conjugation in one easy step.

- Quickly check the success of your conjugation (only 10 minutes!)
- Easy to use
- No costly equipment required
- Compatible with antibody conjugates generated using our Lightning-Link® fluorescent labeling kits and our InnovaCoat® GOLD and LATEX conjugation kits
- Compatible with any other conjugation technology that uses colored labels
- Requires only small volumes (40ul of diluted conjugate)
- Unique to Innova Biosciences

Maleimide Activated Labels, Thiolation Kits

For those who have molecules with thiol groups, our ultra-stable freeze-dried maleimide activated labels are designed to facilitate the production of conjugates.

To complement this range, our Thiolation Kits allow thiols to be introduced easily into proteins and other biomolecules. Our stabilized thiol detection reagent allows the successful introduction of thiols (or presence of thiols) to be confirmed and quantified prior to conjugation with a maleimide activated label.

Secondary reagents

Our high-quality, stable conjugates complement our range of labeling technologies and provide researchers with even more flexibility and choice of detection methods for their immunoassay. Specificity moieties include streptavidin and protein A, while detection moieties include R-PE, Fluorescein, HRP and Alkaline Phosphatase.

Our streptavidin and protein A conjugates are produced using our unique Lightning-Link® bioconjugation technology, therefore providing high quality, stable conjugates for use in your application.

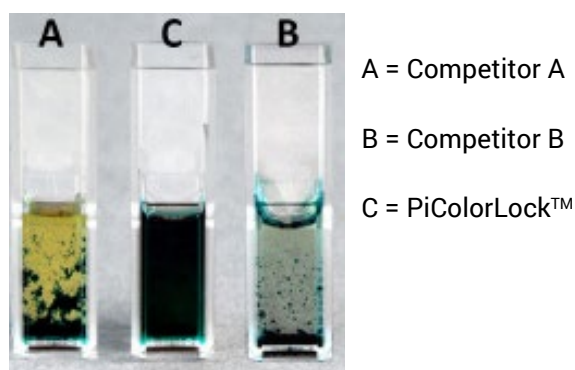
These reagents are suitable for antibody screening, or may be used if only small amounts of un-purified antibody are available.

Phosphate detection reagents

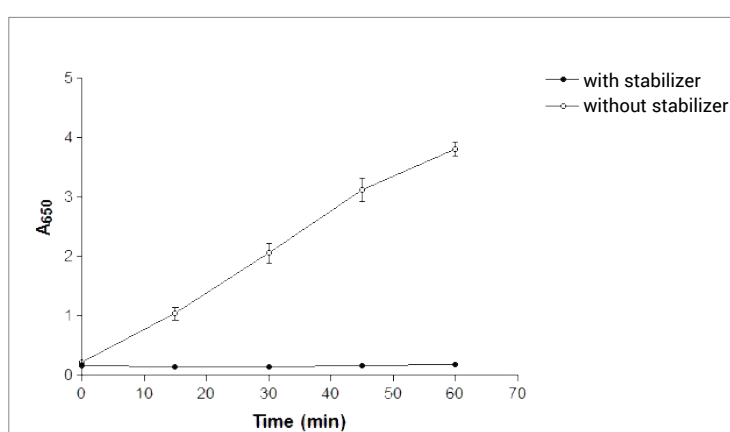
ATPase & GTPase assay kits

At the heart of this range of assay kits is PiColorLock™, a universal phosphate detection reagent for all phosphate-generating enzymes which forms colored complexes that are stable for hours.

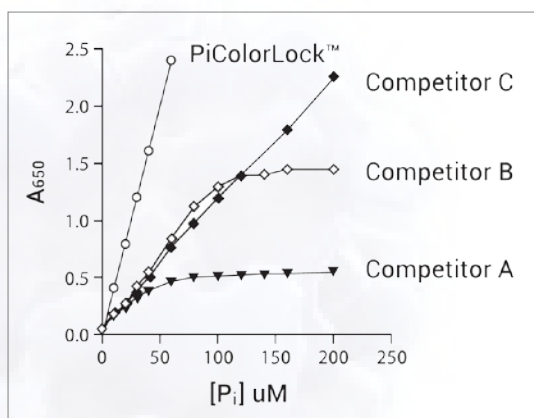
- Colorimetric (non-radioactive) assay
- Special additives speed up color development and suppress non-enzymatic backgrounds with acid-labile substrates (e.g. ATP, GTP)
- Ultra-stable phosphate-dye complexes which last for hours
- Compatible with almost any assay buffer
- Compatible with multiple enzyme targets in drug discovery
- Long shelf life



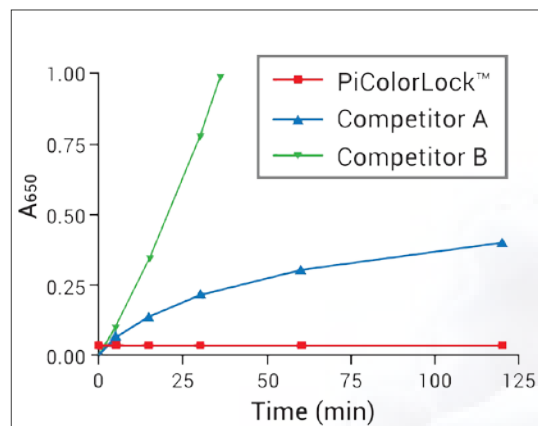
Competitor assays suffer from several problems including reagent precipitation. PiColorLock™ ensures high stability of the colored dye-phosphate complexes (green color).



The PiColorLock™ reagent is often used with unstable substrates (e.g. ATP, GTP) that give rise to non-enzymatic background drift with time. The unique stabilizer, provided in the PiColorLock™ phosphate detection system, blocks this non-enzymatic breakdown generating a stable low background. The stable signal can therefore be read up to several hours after the reaction has ended.



PiColorLock™ has been designed to have a large linear range, thus reducing the need for sample dilution. Competitors' products are linear over a much narrower range of concentrations.



ATP has been incubated in three phosphate detection reagents. A steadily rising non-enzymatic background signal is seen with competitor reagents, whereas PiColorLock™ gives baseline readings.

PiColorLock™ detection reagent

PiColorLock™ is a phosphate detection reagent for measuring the activity of phosphatases, ATPases, GTPases and other enzymes that release inorganic phosphate (Pi). The reagent comes with an Accelerator, Stabilizer and Pi Standard ideal for high throughput screening.

ATPase and GTPase Assay kits

These non-radioactive colorimetric assay kits use a 96 well format. All the necessary reagents are supplied for measuring enzyme activity.

Lyophilized ATP & GTP vials

Ultra high quality ATP and GTP to ensure the lowest possible assay background. Just reconstitute by adding water, avoid multiple freeze-thaw cycles to ensure high performance ATP and GTP in your assay.

PiBind™ resin

PiBind™ resin provides a remarkably quick and easy way to remove contaminating Pi from buffers therefore reducing high assay backgrounds. The resin works over a broad range of pH values and is unaffected by many commonly used buffer additives.



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