

DATASHEET

For Laboratory Use Only.

Not for Use in Human or Veterinary
Diagnostic or Therapeutic Processes.

GXGP ATTO490LS

Goat Anti-Guinea Pig IgG ATTO490LS (H+L)

Kit Content (Cat. #: 2704-1MG)

1.0mg Goat Anti-Guinea Pig IgG ATTO490LS (H+L)
1.0ml Glycerol Buffer

Product Documentation

Goat Anti-Guinea Pig IgG ATTO490LS (H+L) is an antigen-specific secondary antibody, optimized for high-resolution fluorescence microscopy, ensuring brilliant and stable signals for prolonged imaging. Affinity purification effectively removed all goat serum proteins, including immunoglobulins not specifically binding to guinea pig IgG. Following conjugation to ATTO490LS (Abs. max. 496 nm; Em. max. 661 nm), the antibody was further purified by gel filtration.

Hypermol® secondary antibodies are optimized for performance, with a degree of labeling (DOL) between 3 and 9, ensuring high specificity and reduced cross-reactivity.

Goat Anti-Guinea Pig IgG ATTO490LS (H+L) is supplied as 1.0 mg lyophilized antibody.

Reconstitution of Antibodies with Glycerol-Buffer

Add 0.5 ml Glycerol Buffer to the lyophilized antibody to reconstitute a 2 mg/ml stock solution. Vortex until completely dissolved. Final concentrations of the antibody buffer: 0.01M sodium phosphate, 0.1M NaCl, pH 7.4 in 50% glycerol. For live-cell applications use 0.5–1.0 ml ultrapure water instead of Glycerol Buffer to reconstitute the antibody.

Working Dilution

Each individual user should determine the optimum working dilution empirically for the systems. Dilutions of 1:500 – 1:1500 are suitable for many applications.

Each batch of this antibody is thoroughly validated to ensure high quality and consistency. However, due to variations in experimental systems, users are advised to assess the antibody's suitability and optimize conditions for their specific applications.

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Determining the Degree of Labeling (DOL)

1. Protein Concentration

Determine the protein concentration by UV absorption measurement at 280nm ($\epsilon_{\max} = 203,000 \text{ M}^{-1}\text{cm}^{-1}$).

2. Degree of Labelling

The degree of labeling (DOL or dye/protein ratio) is usually determined by absorption spectroscopy making use of the Lambert-Beer law: Absorbance (A) = extinction coefficient (ϵ) \times molar concentration \times path length (d). Simply measure the UV-VIS spectrum of the conjugate in solution in a quartz cuvette. Dilute the solution, if necessary to measure within the linear range.

$$\text{DOL} = \frac{A_{496} \cdot 203000}{A_{280} - (A_{496} \cdot 0.21) \cdot 40000}$$

A_{496} = maximal absorbance at 496nm measured in a cuvette with a pathlength of 1 cm.

A_{280} = maximal absorbance at 280nm measured in a cuvette with a pathlength of 1 cm.

203000 = molar extinction coefficient (ϵ) at the longest-wavelength absorption maximum ($\text{M}^{-1}\text{cm}^{-1}$).

40000 = molar extinction coefficient (ϵ) at the longest-wavelength absorption maximum ($\text{M}^{-1}\text{cm}^{-1}$).

0.21 = correction factor for the fluorophore's absorbance at 280nm.

Storage and Stability

For continuous use, store at 2-8 °C for up to three months. For extended storage, the solution may be frozen in working aliquots at -20 °C. Frozen aliquots are stable for at least six months. Avoid repeated freeze/thawing.

If slight turbidity occurs, the solution can be used as is without clarification by centrifugation. Ensure fluorescent conjugates are protected from light at all times.

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Certificate of Analysis

GXGP ATTO490LS

Goat Anti-Guinea Pig IgG ATTO490LS (H+L)
Cat. #: 2704-1MG

APPEARANCE:	ORANGE CLEAR SOLUTION
PROTEIN CONTENT	1.0MG
DEGREE OF LABELING	3 - 9
PURITY	AFFINITY PURIFIED, >98% PURE ACC. TO DENSITOMETRICAL ANALYSIS FROM COOMASSIE G-250 STAINED SDS-GELS (10%)
IMMUNOFLUORESCENCE	1:500 - 1:1500 IN PBS ON 4% PARA-FORMALDEHYDE FIXED CULTURED CELLS WITH ANTIBODIES AGAINST ACTIN AND TUBULIN.
FREE DYE	< 5% OF TOTAL FLUORESCENCE

This document certifies that Goat-Anti Guinea Pig IgG ATTO490LS (H+L) meets the specifications described in the accompanying documentation. Testing and validation processes ensure compliance with Hypermol® quality standards and suitability for their intended purpose, as defined under Research Use Only (RUO).

This certificate is valid without a signature and issued by Hypermol EK, Germany, under electronic validation protocols.

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