

## Datasheet for 011-0902

**Rabbit IgG Texas Red™****Overview**

|                      |                                                            |
|----------------------|------------------------------------------------------------|
| <b>Description:</b>  | Rabbit IgG Whole Molecule Texas Red™ Conjugated - 011-0902 |
| <b>Item No.:</b>     | 011-0902                                                   |
| <b>Size:</b>         | 1 mg                                                       |
| <b>Applications:</b> | IF, Multiplex                                              |
| <b>Origin:</b>       | Rabbit                                                     |

**Product Details**

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background:</b>        | Secreted as part of the adaptive immune response by plasma B cells, immunoglobulin G constitutes 75% of serum immunoglobulins. Immunoglobulin G binds to viruses, bacteria, as well as fungi and facilitates their destruction or neutralization via agglutination (and thereby immobilizing them), activation of the complement cascade, and opsonization for phagocytosis. The whole IgG molecule possesses both the F(c) region, recognized by high-affinity Fc receptor proteins, as well as the F(ab) region possessing the epitope-recognition site. Both heavy and light chains of the antibody molecule are present. |
| <b>Synonyms:</b>          | Rabbit IgG whole molecule Texas Red™ conjugate, Rabbit IgG Texas Red™ conjugation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species of Origin:</b> | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Conjugate:</b>         | Texas Red®                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Format:</b>            | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Type:</b>              | Native Protein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>F/P Ratio:</b>         | 2.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**Target Details**

|                            |                                                                                                                                                                                                                                                                                                |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity/Specificity:</b> | This product was prepared from normal serum by delipidation, salt fractionation, ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Rabbit IgG and anti-Rabbit Serum. |
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## Application Details

|                                |                                                                                                                                                                                                                                                                                                       |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suggested Applications:</b> | IF, Multiplex (Based on references)                                                                                                                                                                                                                                                                   |
| <b>Application Note:</b>       | Rabbit IgG whole molecule Texas Red <sup>™</sup> is designed for immunofluorescence microscopy, fluorescence based plate assays (FLISA) and fluorescent western blotting. This product is also suitable for multiplex analysis, including multicolor imaging, utilizing various commercial platforms. |
| <b>Assay Dilutions:</b>        | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                                       |

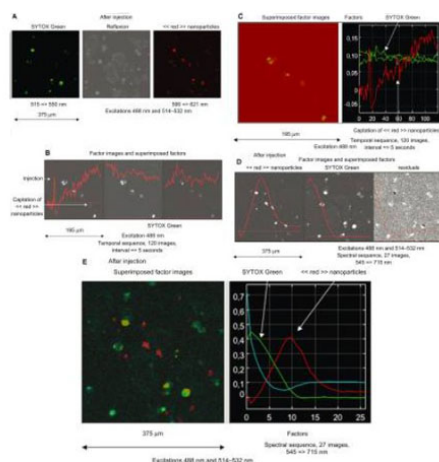
## Formulation

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <b>Physical State:</b>        | Lyophilized                                                            |
| <b>Concentration:</b>         | 1.0 mg/mL by UV absorbance at 280 nm                                   |
| <b>Buffer:</b>                | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2             |
| <b>Preservative:</b>          | 0.01% (w/v) Sodium Azide                                               |
| <b>Stabilizer:</b>            | 10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free |
| <b>Reconstitution Volume:</b> | 1.0 mL                                                                 |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent)                           |

## Shipping & Handling

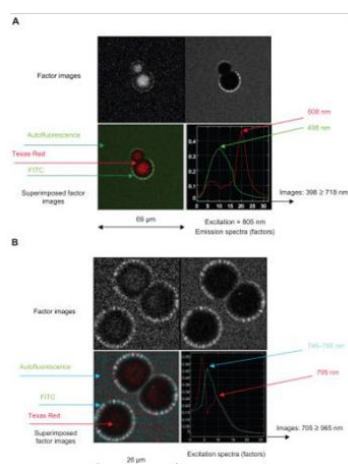
|                            |                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shipping Condition:</b> | Ambient                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage Condition:</b>  | Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use. |
| <b>Expiration:</b>         | Expiration date is one (1) year from date of receipt.                                                                                                                                                                                                                                                                                           |

## Images



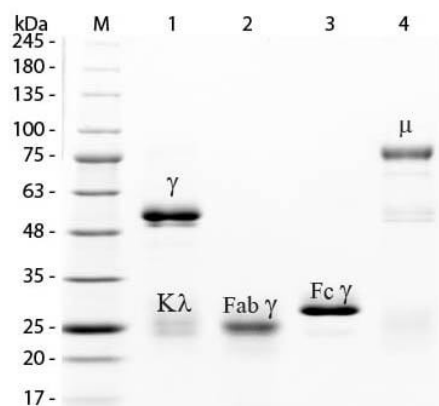
### Immunofluorescence Microscopy

Case of temporal and spectral observations of iron nanoparticles conjugated with Texas Red injected in a culture of untreated murine cardiac HL1-NB cells counterstained with SYTOX Green in which emissions are collected through band-pass filters. Goat anti-rabbit IgG microbeads were incubated with Texas Red conjugated rabbit IgG (p/n 011-0902) in order to obtain fluorescent nanoparticles. A) Regular mode through band-pass filters after injection. B) The emission is then collected in the temporal mode in a long-pass-filter and processed by means of FAMIS. A stable emission corresponding to SYTOX Green and an emission uptake corresponding to red nanoparticles are visualized to localize nanoparticles in cell compartments. C) Superimposition in true color of the factor image. In some cells, the presence of a high signal emphasizes the fact that nanoparticles accumulate inside cytoplasm. D) Spectral mode through 10 nm band-pass filters. Investigation by means of FAMIS. A green emission (535 nm) corresponding to SYTOX Green in the first factor image and a red emission (610 nm) corresponding to red nanoparticles are visualized in the second factor image. Nanoparticles are either captured or not by the cells. E) Superimposition in true color of these factor images is performed to localize nanoparticles in cell compartments. Figure 3. PMID: 20463934.



### Immunofluorescence Microscopy

Spectral observations of FTR (FITC + Texas Red) beads in which (A) emission and (B) excitation sequences are collected and processed by FAMIS. Texas Red-conjugated rabbit IgG (p/n 011-0902). Abbreviation: FAMIS, factor analysis of medical image sequences. Fig 2. PMID: 23109806.



#### SDS-PAGE

SDS-PAGE of Rabbit IgG Whole Molecule Rhodamine Conjugated (p/n 011-0002). Lane M: 3  $\mu$ L Opal Prestained Marker (p/n MB-210-0500). Lane 1: Reduced Rabbit IgG Whole Molecule Rhodamine Conjugated (p/n 011-0002). Lane 2: Reduced Rabbit IgG F(ab) Fragment (p/n 011-0105). Lane 3: Reduced Rabbit IgG F(c) Fragment (p/n 011-0103). Lane 4: Reduced Rabbit IgM Whole Molecule (p/n 011-0107). Load: 1  $\mu$ g for F(ab) and F(c); 1.2  $\mu$ g for IgG and IgM. Predicted/Observed size: IgG at 50 and 25 kDa; F(c) at 25 kDa; F(ab) at 25 kDa; IgM at 70 and 23 kDa. Observed F(c) Fragment migrates slightly higher.

## References

- Kahn, E et al. Fluorescence excitation analysis by two-photon confocal laser scanning microscopy: a new method to identify fluorescent nanoparticles on histological tissue sections. *International Journal of Nanomedicine* (2012)
- Kahn, E et al. Iron nanoparticles increase 7-ketocholesterol-induced cell death, inflammation, and oxidation on murine cardiac HL1-NB cells. *International Journal of Nanomedicine* (2010)

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.