

Datasheet for 612-144-007

## Rat IgM (mu chain) Antibody DyLight™ 680 Conjugated

### Overview

<b>Description:</b>	Goat Anti-Rat IgM (mu chain) Antibody DyLight™ 680 Conjugated - 612-144-007
<b>Item No.:</b>	612-144-007
<b>Size:</b>	100 µg
<b>Reactivity:</b>	Rat
<b>Host Species:</b>	Goat

### Product Details

<b>Background:</b>	Anti-Rat IgM antibody specifically detects rat IgM heavy chain. Immunoglobulin M is the largest antibody isotype and the first to be secreted against an initial exposure to antigen. IgM is predominantly produced in the spleen. Formed from covalently linking 5 immunoglobulins together, the approximate molecular weight of IgM is 900kDa and possesses 10 binding sites (though due to the size of most antigens, not all sites are capable of binding at once). Due to this large size, IgM is typically isolated to the serum. Anti-Rat IgM antibody is ideal for investigators in Immunology, Microbiology, and Cell Biology. This Rat IgM Antibody is conjugated to DyLight™680.
<b>Synonyms:</b>	Goat Anti Rat IgM (mu chain) Antibody DyLight 680™ Conjugated, Goat Anti-Rat IgM mu chain Antibody DyLight 680™ Conjugation
<b>Host Species:</b>	Goat
<b>Specificity:</b>	IgM µ chain
<b>Conjugate:</b>	DyLight™ 680
<b>Clonality:</b>	Polyclonal
<b>Format:</b>	IgG
<b>F/P Ratio:</b>	2.1

### Target Details

<b>Reactivity:</b>	Rat
<b>Immunogen:</b>	Rat IgM whole molecule

**Purity/Specificity:** This product was prepared from monospecific antiserum by immunoaffinity chromatography using Rat IgM coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum, Rat IgM and Rat Serum. No reaction was observed against other rat heavy or light chain proteins.

## Application Details

**Application Note:** This product 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. The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation.

**Assay Dilutions:** All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

**FLISA:** >1:20,000

**IF:** >1:5,000

**WB:** >1:10,000

## Formulation

**Physical State:** Lyophilized

**Concentration:** 1.0 mg/mL by UV absorbance at 280 nm

**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

**Preservative:** 0.01% (w/v) Sodium Azide

**Stabilizer:** 10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free

**Reconstitution Volume:** 100 µL

**Reconstitution Buffer:** Restore with deionized water (or equivalent)

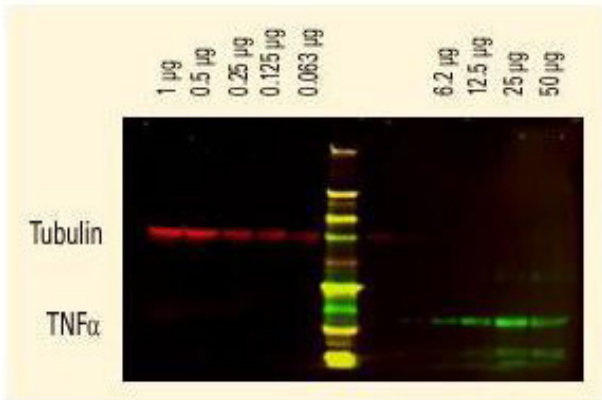
## Shipping & Handling

**Shipping Condition:** Ambient

**Storage Condition:** 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.

**Expiration:** Expiration date is one (1) year from date of receipt.

## Images









### Western Blot

DyLight™ dyes can be used for two-color Western Blot detection with low background and high signal. Anti-tubulin was detected using a DyLight™ 680 conjugate. Anti-TNFα was detected using a DyLight™ 800 conjugate. The image was captured using the Odyssey® Infrared Imaging System developed by LI-COR.

### Diagram

Properties of DyLight™ Conjugates.

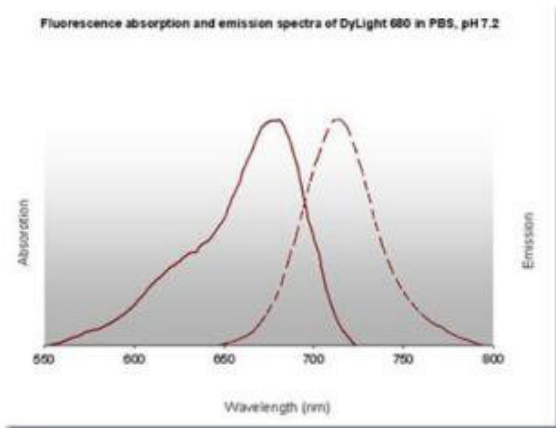
Emission	Color	DyLight™ Dye	Ex/Em (nm)	$\epsilon$ ( $M^{-1} cm^{-1}$ )	Similar Dyes
Blue		405	400/420	30,000	Alexa™ 405, Cascade Blue
Green		488	493/518	70,000	Alexa™ 488, Cy2®, FITC
Yellow		549	550/568	150,000	Alexa™ 546, Alexa 555, Cy3®, TRITC
Red		649	646/674	250,000	Alexa™ 647, Cy5®
Near Infrared		680	682/715	140,000	Alexa™ 680, Cy5.5®, IRDye™ 700
Infrared		800	770/794	270,000	IRDye™ 800



### Western Blot

Western Blot of Anti-Rat IgM (mu chain) (GOAT) Antibody (p/n 612-1107). Lane M: 3  $\mu$ l Molecular Ladder. Lane 1: Rat IgG whole molecule (p/n 012-0102). Lane 2: Rat IgG F(c) Fragment (p/n 012-0103). Lane 3: Rat IgG Fab Fragment (p/n 012-0105). Lane 4: Rat IgM Whole Molecule (p/n 012-0107). Lane 5: Rat Serum (p/n D310-05). All samples were reduced. Load: 50 ng per lane. Block: MB-070 for 30 min at RT. Primary Antibody: Anti-Rat IgM (mu chain) (GOAT) Antibody (p/n 612-1107) 1:1,000 for 60 min at RT. Secondary Antibody: Anti-Goat IgG (DONKEY) Peroxidase Conjugated Antibody (p/n CUST10) 1:40,000 in MB-070 for 30 min at RT. Predicted/Observed Size: 25 and 55 kDa for Rat IgG and Serum, 25 kDa for F(c) and Fab, 78 and 25 kDa for IgM. Rat F (c) migrates slightly higher.

### Diagram



## 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.