Revised: January 17, 2019



# **Product Information**

## Goat Anti-Rat IgG (H+L), Whole Antibody, Highly Cross-Adsorbed (min x Bv, Hs, Hu, Rb)

CF®350347/448 nm20147-150 uLCF®350347/448 nm20147-1mg1 mg (lyophilized)CF®405M408/452 nm20374-50uL500 uLCF®488A408/515 nm20023-150 uLCF®488A490/515 nm20023-1mg1 mg (lyophilized)CF®543541/560 nm20321-150 uLCF®543541/560 nm20321-150 uLCF®555555/565 nm2023-1500 uLCF®568555/565 nm2023-150 uLCF®568562/583 nm2023-150 uLCF®568562/583 nm20096-150 uLCF®568562/583 nm20096-150 uLCF®568562/583 nm20155-150 uLCF®564563/661 nm20155500 uLCF®640R630/650 nm20133-150 uLCF®640R642/662 nm20133-150 uLCF®640R642/662 nm20088-150 uLCF®647650/665 nm20283-150 uL	CF® Dye	Ex/Em	Catalog No.	Size
Image: CF®405M     408/452 nm     20374-50uL     50 uL       CF®405M     408/452 nm     20374-50uL     500 uL       CF®488A     409/515 nm     20023-1     50 uL       CF®488A     490/515 nm     20023-1     500 uL       CF®543     541/560 nm     20321-1     50 uL       CF®543     541/560 nm     20321-1     500 uL       CF®555     555/565 nm     20233-1     500 uL       CF®568     555/565 nm     20233-1     500 uL       CF®568     562/583 nm     20233-1     500 uL       CF®568     562/583 nm     20096-1     500 uL       CF®568     562/583 nm     20096-1     500 uL       CF®568     562/583 nm     20096-1     500 uL       CF®568     562/583 nm     20155-1     50 uL       CF®568     563/614 nm     20155-1     50 uL       CF®6633     630/650 nm     20133-1     50 uL       CF®6640R     642/662 nm     20133-1     50 uL       CF®640R     642/662 nm     20283-1     50 uL	CF®350	347/448 nm	20147-1	50 uL
CF®405M     408/452 nm     20374-50uL     50 uL       20374-50uL     500 uL     20374-50uL     500 uL       20374-1mg     1 mg (lyophilized)     20374-50uL     500 uL       2074-1mg     1 mg (lyophilized)     20023-1     50 uL       2074-500L     20023-1     50 uL     20023-1       CF®488A     490/515 nm     20023-1mg     1 mg (lyophilized)       20521-1     50 uL     20321-1     50 uL       CF®543     541/560 nm     20321-1     50 uL       20321-1mg     1 mg (lyophilized)     20321-1     50 uL       20321-1mg     1 mg (lyophilized)     20233-1     50 uL       CF®555     555/565 nm     20233-1     50 uL     20233-1       CF®568     562/583 nm     20096-1     50 uL     20096-1       CF®568     562/583 nm     20096-1     50 uL     20155-1       CF®594     593/614 nm     20155-1     50 uL       CF®6633     630/650 nm     20133-1     50 uL       CF®6640R     642/662 nm     20088-1     50 uL <			20147	500 uL
CF®405M     408/452 nm     20374-500uL     500 uL       20374-500uL     500 uL     20374-500uL     500 uL       2074-1mg     1 mg (lyophilized)     20023-1     500 uL       20874-500uL     20023     500 uL     20023-1     500 uL       20023-1mg     1 mg (lyophilized)     20023-1mg     1 mg (lyophilized)       2066543     541/560 nm     20321-1     50 uL     20321-1       CF®543     541/560 nm     20321-1     50 uL     20321-1       CF®555     555/565 nm     20233-1     50 uL     20233-1       CF®568     555/565 nm     20233-1mg     1 mg (lyophilized)       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®5694     593/614 nm     20155-1     50 uL       CF®594     593/614 nm     20155-1     50 uL       CF®6633     630/650 nm     20133-1     50 uL       CF®6647     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1			20147-1mg	1 mg (lyophilized)
CF®488A     490/515 nm     20023-1     50 uL       CF®488A     490/515 nm     20023-1     50 uL       CF®543     541/560 nm     20321-1     50 uL       CF®543     541/560 nm     20321-1     50 uL       CF®555     555/565 nm     2023-1     50 uL       CF®558     555/565 nm     2023-1     50 uL       CF®568     562/583 nm     20233-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®5694     593/614 nm     20155-1     50 uL       CF®594     593/614 nm     20155-1     50 uL       CF®6633     630/650 nm     20133-1     50 uL       CF®6640R     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL		408/452 nm	20374-50uL	50 uL
CF®488A     490/515 nm     20023-1     50 uL       CF®543     541/560 nm     20321-1     50 uL       CF®543     541/560 nm     20321-1     50 uL       CF®543     541/560 nm     20321-1     50 uL       CF®555     555/565 nm     20233-1     50 uL       CF®558     555/565 nm     20233-1     50 uL       CF®558     555/565 nm     20233-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®5694     562/583 nm     20096-1     50 uL       CF®594     593/614 nm     20155-1     50 uL       CF®6594     593/614 nm     20155-1     50 uL       CF®640R     630/650 nm     20133-1     50 uL       CF®640R     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL	CF®405M		20374-500uL	500 uL
CF®488A     490/515 nm     20023     500 uL       20023-1mg     1 mg (lyophilized)     20023-1mg     1 mg (lyophilized)       CF®543     541/560 nm     20321-1     50 uL     20321-1       CF®543     541/560 nm     20321-1 mg     1 mg (lyophilized)       CF®555     555/565 nm     20233-1     50 uL       CF®568     555/565 nm     20233-1 mg     1 mg (lyophilized)       CF®568     562/583 nm     20096-1 mg     50 uL       CF®568     562/583 nm     20096-1 mg     1 mg (lyophilized)       CF®594     593/614 nm     20155-1 50 uL     20155-1       CF®6633     630/650 nm     20133-1     50 uL       CF®6634     630/650 nm     20133-1     50 uL       CF®6640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL			20374-1mg	1 mg (lyophilized)
CF®543     541/560 nm     20023-1mg     1 mg (lyophilized)       CF®543     541/560 nm     20321-1     50 uL       CF®554     541/560 nm     20321-1mg     1 mg (lyophilized)       CF®555     555/565 nm     20233-1     50 uL       CF®556     555/565 nm     20233-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®594     593/614 nm     20155-1     50 uL       CF®6633     630/650 nm     20133-1     50 uL       CF®6634     630/650 nm     20133-1     50 uL       CF®6640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL		490/515 nm	20023-1	50 uL
CF®543     541/560 nm     20321-1     50 uL       CF®553     541/560 nm     20321-1mg     1 mg (lyophilized)       CF®555     555/565 nm     20233-1     50 uL       CF®555     555/565 nm     20233-1     50 uL       CF®556     555/565 nm     20233-1mg     1 mg (lyophilized)       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1     50 uL       CF®594     593/614 nm     20155-1     50 uL       CF®633     630/650 nm     20133-1     50 uL       CF®640R     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL	CF®488A		20023	500 uL
CF®543     541/560 nm     20321     500 uL       20321-1mg     1 mg (lyophilized)     20321-1mg     1 mg (lyophilized)       CF®555     555/565 nm     20233-1     50 uL     20233-1       CF®555     555/565 nm     20233-1     50 uL     20233-1       CF®558     555/565 nm     20233-1     50 uL     20233-1       CF®568     562/583 nm     20096-1     50 uL     20096-1       CF®568     562/583 nm     20096-1     50 uL     20096-1       CF®594     593/614 nm     20155-1     50 uL     20155-1       CF®633     630/650 nm     20133-1     50 uL     20133-1       CF®640R     630/650 nm     20133-1     50 uL     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL     20283-1     50 uL			20023-1mg	1 mg (lyophilized)
CF®555     555/565 nm     20233-1     50 uL       CF®555     555/565 nm     20233-1     50 uL       CF®556     555/565 nm     20233-1mg     1 mg (lyophilized)       CF®568     562/583 nm     20096-1     50 uL       CF®5694     562/583 nm     20096-1mg     1 mg (lyophilized)       CF®594     593/614 nm     20155-1     50 uL       CF®6633     630/650 nm     20133-1     50 uL       CF®6633     630/650 nm     20133-1     50 uL       CF®6640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL	CF®543	541/560 nm	20321-1	50 uL
CF®555     555/565 nm     20233-1     50 uL       CF®555     555/565 nm     20233     500 uL       20233-1mg     1 mg (lyophilized)       20096-1     50 uL       20096-1mg     1 mg (lyophilized)       20096-1mg     1 mg (lyophilized)       20096-1mg     1 mg (lyophilized)       20155-1     50 uL       20155-1     50 uL       20155-1mg     1 mg (lyophilized)       20133-1     50 uL       20133-1     50 uL       20133-1mg     1 mg (lyophilized)       20088-1     50 uL       20088-1     50 uL       20088-1mg     1 mg (lyophilized)       20283-1     50 uL       20283-1     50 uL			20321	500 uL
CF®555     555/565 nm     20233     500 uL       20233-1mg     1 mg (lyophilized)     20233-1mg     1 mg (lyophilized)       CF®568     562/583 nm     20096-1     500 uL       CF®568     562/583 nm     20096-1     500 uL       CF®568     562/583 nm     20096-1     500 uL       CF®594     593/614 nm     20155-1     50 uL       CF®633     630/650 nm     20135-1     50 uL       CF®640R     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL			20321-1mg	1 mg (lyophilized)
CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096-1 mg     50 uL       CF®594     593/614 nm     20155-1     50 uL       CF®633     593/614 nm     20155-1     50 uL       CF®633     630/650 nm     20133-1     50 uL       CF®640R     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL	CF®555	555/565 nm	20233-1	50 uL
CF®568     562/583 nm     20096-1     50 uL       CF®568     562/583 nm     20096     500 uL       20096-1mg     1 mg (lyophilized)     20096-1mg     1 mg (lyophilized)       CF®594     593/614 nm     20155-1     50 uL       CF®633     630/650 nm     20133-1     50 uL       CF®640R     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL			20233	500 uL
CF®568     562/583 nm     20096     500 uL       20096-1mg     1 mg (lyophilized)     20096-1mg     1 mg (lyophilized)       CF®594     593/614 nm     20155-1     50 uL       CF®633     630/650 nm     20133-1     50 uL       CF®640R     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     500 uL       CF®647     650/665 nm     20283-1     50 uL			20233-1mg	1 mg (lyophilized)
CF®594     593/614 nm     20096-1mg     1 mg (lyophilized)       CF®594     593/614 nm     20155-1     50 uL       20155     500 uL     20155-1mg     1 mg (lyophilized)       CF®633     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20133-1mg     1 mg (lyophilized)       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     500 uL       CF®647     650/665 nm     20283-1     50 uL	CF®568	562/583 nm	20096-1	50 uL
CF®594     593/614 nm     20155-1     50 uL       CF®633     593/614 nm     20155     500 uL       CF®633     630/650 nm     20133-1     50 uL       CF®640R     630/650 nm     20133-1     500 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     642/662 nm     20088-1     500 uL       CF®640R     642/662 nm     20088-1     500 uL       CF®640R     642/662 nm     20283-1     50 uL       CF®647     650/665 nm     20283     500 uL			20096	500 uL
CF®594     593/614 nm     20155     500 uL       20155     500 uL     20155-1mg     1 mg (lyophilized)       2058     630/650 nm     20133-1     50 uL       20133     500 uL     20133-1     50 uL       20133     500 uL     20133-1     1 mg (lyophilized)       20133-1mg     1 mg (lyophilized)     20088-1     50 uL       20088     500 uL     20088-1     50 uL       20088-1mg     1 mg (lyophilized)     20283-1     50 uL       20283-1     50 uL     20283-1     50 uL			20096-1mg	1 mg (lyophilized)
CF®633     630/650 nm     20135-1mg     1 mg (lyophilized)       CF®633     630/650 nm     20133-1     50 uL       20133-1mg     500 uL     20133-1mg     1 mg (lyophilized)       CF®640R     642/662 nm     20088-1     500 uL       CF®640R     642/662 nm     20088-1     500 uL       20088-1mg     1 mg (lyophilized)     20088-1mg     1 mg (lyophilized)       CF®647     650/665 nm     20283-1     500 uL	CF®594	593/614 nm	20155-1	50 uL
CF®633     630/650 nm     20133-1     50 uL       CF®640R     642/662 nm     20088-1     50 uL       CF®640R     650/665 nm     20283-1     50 uL			20155	500 uL
CF®633     630/650 nm     20133     500 uL       20133.1mg     1 mg (lyophilized)     20133-1mg     1 mg (lyophilized)       CF®640R     642/662 nm     20088-1     500 uL       20088.1mg     1 mg (lyophilized)       20088-1mg     1 mg (lyophilized)       20088-1mg     1 mg (lyophilized)       20283-1     50 uL       20283-1     50 uL			20155-1mg	1 mg (lyophilized)
CF®640R     642/662 nm     20088-1     50 uL       CF®647     650/665 nm     20283-1     50 uL	CF®633	630/650 nm	20133-1	50 uL
CF®640R     642/662 nm     20088-1     50 uL       20088     500 uL     20088-1mg     1 mg (lyophilized)       20088-1mg     1 mg (lyophilized)     20283-1     50 uL       CF®647     650/665 nm     20283     500 uL			20133	500 uL
CF®640R     642/662 nm     20088     500 uL       20088-1mg     1 mg (lyophilized)       20283-1     50 uL       CF®647     650/665 nm			20133-1mg	1 mg (lyophilized)
CF®647     650/665 nm     20283-1     500 uL	CF®640R	642/662 nm	20088-1	50 uL
CF®647     650/665 nm     20283-1     50 uL       20283     500 uL     500 uL			20088	500 uL
CF®647 650/665 nm 20283 500 uL			20088-1mg	1 mg (lyophilized)
	CF®647	650/665 nm	20283-1	50 uL
20283-1mg 1 mg (lyophilized)			20283	500 uL
			20283-1mg	1 mg (lyophilized)

CF® Dye	Ex/Em	Catalog No.	Size
CF®660C	667/685 nm	20370-50uL	50 uL
		20370-500uL	500 uL
		20370-1mg	1 mg (lyophilized)
050000	681/698 nm	20069-1	50 uL
CF®680		20069	250 uL
CF®770	770/797 nm	20383-50uL	50 uL
CF®//U		20383-250uL	250 uL
APC	633,640/660 nm	20413-100uL	100 uL
		20413-500uL	500 uL
R-PE	496, 546, 565/578 nm	20354-200uL	200 uL
		20354-1mL	1 mL

Bv: bovine; Hs: horse; Hu: human; Rb: rabbit

### Concentration

#### Liquid format:

CF dye: 2 mg/mL in pH ~7.4 PBS containing 50% glycerol, 2 mg/ml bovine serum albumin (IgG-free and protease-free) and 0.05% sodium azide.

R-PE: 0.5mg/mL in pH ~7.4 PBS containing 2 mg/ml bovine serum albumin (IgG-free and protease-free) and 0.05% sodium azide.

APC: 0.5 mg/mL in pH  $\sim$ 7.4 PBS containing 50% glycerol, 2 mg/ml bovine serum albumin (IgG-free and protease-free) and 0.05% sodium azide.

Lyophilized format (after reconstitution): 2 mg/mL in pH  ${\sim}7.4$  PBS containing 15 mg/mL bovine serum albumin (IgG-free and protease-free) and 20 mg/mL trehalose.

#### Storage and Handling

Store at -20°C (except for R-PE conjugates which is stored at 4°C), protected from light. Product is stable for at least 6 months from date of receipt when stored as recommended. Liquid format antibodies contain 50% glycerol and will not freeze at -20°C.

Reconstitution (lyophilized format only): add 0.5 mL dH<sub>2</sub>O and mix gently to dissolve. Store at -20°C, protected from light. Aliquot to avoid freeze-thaw cycles. Alternatively, glycerol can be added to the antibody so that it will not freeze at -20°C: add 0.25 mL dH<sub>2</sub>O to the lyophilized antibody and mix gently to dissolve, then add 0.25 mL glycerol and mix well. Optional: a preservative may be added, such as 0.05% (final concentration) sodium azide.

Note: storage of the antibody for more than a day at final working dilution is not recommended.

#### **Product Description**

Goat anti-rat IgG (H+L), whole antibody, highly cross-adsorbed is an affinity purified goat antibody that recognizes rat IgG. This antibody is highly-cross adsorbed for multiple labeling, and has minimal cross-reactivity with bovine, horse, human, or rabbit serum proteins.

CF® dyes are superior to Alexa Fluor®, DyLight®, and Cy® dyes for antibody labeling by having combined advantages in brightness, photostability, specificity and novel features ideal for in vivo imaging. For more information about CF® dyes, download our CF® Dye Selection Guide at www.biotium.com.

#### **Recommended Dilution Range**

Fluorescence microscopy: 1-2 ug/mL Flow cytometry: 1 ug/10<sup>6</sup> cells Near-infrared western detection: 50-100 ng/mL

These concentrations are provided as a starting point for optimization; appropriate dilutions should be determined empirically. Generally IgG conjugates are used in the range of 1-10 ug/mL.

For more detailed protocols for immunofluorescence staining for fluorescence microscopy, flow cytometry, or fluorescence-based western detection, please visit our website.

#### Accessory products for immunofluorescence

Cat. No.	Product Name
23001	EverBrite™ Mounting Medium
23002	EverBrite™ Mounting Medium with DAPI
23003	EverBrite™ Hardset Mounting Medium
23004	EverBrite™ Hardset Mounting Medium with DAPI
23005	CoverGrip™ Coverslip Sealant
23007	TrueBlack™ Lipofuscin Autofluorescence Quencher
40061	RedDot™2 Far Red Nuclear Counterstain
22005	Mini Super <sup>н⊤</sup> Pap Pen 2.5 mm tip, ~400 uses
22006	Super <sup>н⊤</sup> Pap Pen 4 mm tip, ~800 uses
22003	Mini-Cell Scrapers
23006	Flow Cytometry Fixation/Permeabilization Kit
22015	Fixation Buffer
22016	Permeabilization Buffer
22017	Permeabilization and Blocking Buffer
22010	10X Fish Gelatin Blocking Agent
22011	Fish Gelatin Powder
22014	30% Bovine Serum Albumin Solution
22002	Tween®-20

Please visit www.biotium.com to view our full selection of products featuring bright and photostable fluorescent CF® dyes, including Mix-n-Stain™ antibody labeling kits, primary antibody conjugates, streptavidin, phalloidin, and other bioconjugates, as well as conjugates of biotin, HRP, AP, R-PE, APC and PerCP.

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