

For Research Use Only

Nano-Secondary® anti-mouse IgG1, recombinant VHH, Alexa Fluor® 647 [CTK0103, CTK0104]

Catalog Number: sms1AF647-1

3 Publications



www.ptglab.com

Basic Information

Catalog Number:
sms1AF647-1

Applications:
IF, WB, FC

Host:
Alpaca

Conjugate:
Alexa Fluor® 647

Type:

Mixture of 2 monoclonal Nanobodies

Class:

Recombinant

RRID:

AB_2827579

Purification Method:

Recombinant expression, affinity purification
IMAC

Description

Nano-Secondary® anti-mouse IgG1, Fc-specific recombinant VHH reagent uses a novel class of anti-mouse IgG isotype specific antibodies. This secondary antibody product consists of Nanobodies that bind to mouse IgG1 with high affinity & specificity.

Species Reactivity

Mouse IgG1 Fc-fragment

No cross-reactivity: goat, guinea pig, rabbit, rat, sheep, human, macaque serum proteins, mouse IgG2a, IgG2b, IgG2c, IgG3

Physical State

Liquid

Suggested Dilution

Immunofluorescence 1:500

Super-resolution microscopy 1:500

Western blot 1:1,000

Affinity (K_D)

CTK0103: K_D = 0.13 nM, CTK0104: K_D = 0.63 nM

Storage

Storage:

Store at -20°C short term or -80°C long term. Aliquot upon delivery. Avoid freeze-thaw cycles.

Storage Buffer:

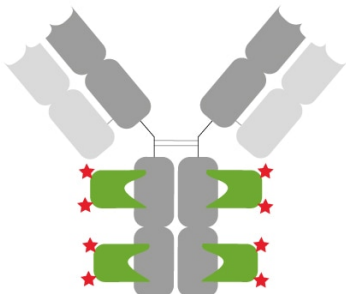
10 mM HEPES pH 7.0, 500 mM NaCl, 5 mM EDTA, Preservative: 0.09 % Sodium azide

For technical support and original validation data for this product please contact

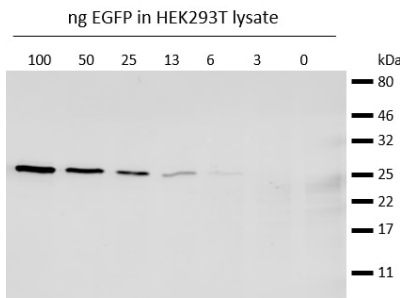
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or E: proteintech@ptglab.com
1(312) 455-8498 (outside USA) W: www.ptglab.com

This product is exclusively available under
Proteintech Group brand and is not available
to purchase from any other manufacturer.

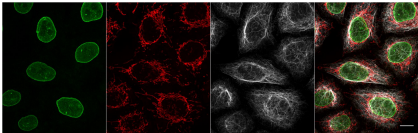
Selected Validation Data



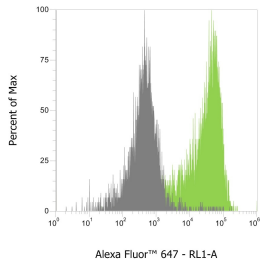
Anti-mouse IgG1 Nano-Secondary: Well-defined and characterized immunostaining. Primary anti-mouse IgG1 antibody (grey) with 2X2 monoclonal mouse Fc- specific Nanobodies (green) bound. In total, 8 fluorophores (red stars) label the mouse IgG1 primary antibody.



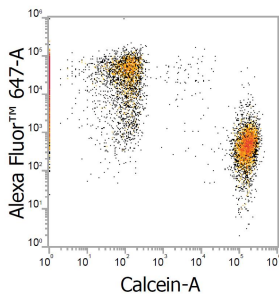
Western blot analysis of EGFP (EGFP-250, ChromoTek) added to HEK293T cell lysate. Detection with anti-GFP mouse IgG 1 antibody and alpaca anti-mouse IgG1 VHH Alexa Fluor® 647.



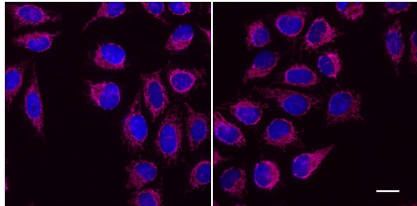
Multiplexed immunostaining of HeLa cells with 3 subclass-specific alpaca anti-mouse Nano-Secondaries. Grey: Mouse IgG1 anti-Vimentin + alpaca anti-mouse IgG1 VHH Alexa Fluor® 647. Green: Mouse IgG2b anti-Lamin + alpaca anti-mouse IgG2b VHH Alexa Fluor® 488. Red: Mouse IgG3 anti-MOT + alpaca anti-mouse IgG3 VHH Alexa Fluor® 568. Scale bar, 10 µm. Images were recorded at the Core Facility Bioimaging at the Biomec



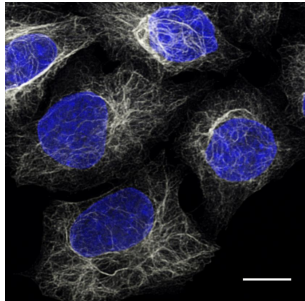
Flow cytometry with anti-mouse Nano-Secondaries. Jurkat CD3+ and Jurkat CD3- cell lines were mixed and immunostained live with anti-CD3 mouse IgG1 and alpaca anti-mouse IgG1 VHH Alexa Fluor® 647 (1:600). Two cell populations can be clearly distinguished with a 2-log shift: CD3-positive cells



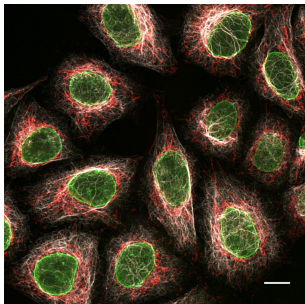
Immunostaining with Alpaca anti-mouse IgG1 Alexa Fluor 647 Nano-Secondaries for FACS. Jurkat CD3+ and Jurkat CD3- cell lines were mixed and immunostained live with anti-CD3 mouse IgG1 + alpaca anti-mouse IgG1 VHH Alexa Fluor 647 (1:600). CD3- cells were pre-stained with Calcein. Two cell populations can be clearly distinguished on the dot-plot: Alexa Fluor 647-positive Calcein-negative cells and Alexa Fluor 647-negative



One-step staining (left) vs. sequential staining (right) of HeLa cells with anti-COX4 (mitochondria) mouse IgG1 monoclonal primary antibody + alpaca anti-mouse IgG1 VHH Alexa Fluor® 647 (magenta). Cell nuclei are stained with DAPI (blue). Scale bar, 20 µm.



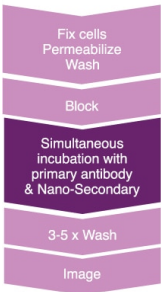
HeLa cells were immunostained with anti-Vimentin mouse IgG1 antibody and alpaca anti-mouse IgG1 VHH Alexa Fluor® 647 (grey). Nuclei were stained with DAPI, blue. Scale bar, 10 µm. Images were recorded at the Core Facility Bioimaging at the Biomedical Center, LMU Munich.



Multiplexed immunostaining of HeLa cells with 3 subclass-specific alpaca anti-mouse Nano-Secondaries. Grey: Mouse IgG1 anti-Vimentin + alpaca anti-mouse IgG1 VHH Alexa Fluor® 647. Green: Mouse IgG2b anti-Lamin + alpaca anti-mouse IgG2b VHH Alexa Fluor® 488. Red: Mouse IgG3 anti-MOT + alpaca anti-mouse IgG3 VHH Alexa Fluor® 568. Scale bar, 10 µm. Images were recorded at the Core Facility Bioimaging at the Biomec

Subclass specific Nano-Secondaries	
IgG applied to membrane	
Subclass specific probe	IgG
Alexa Fluor® 647 conjugated	
Alpaca α-mouse IgG1 V _H J _H	Mouse IgG1
Alpaca α-mouse IgG2b V _H J _H	Mouse IgG2a
Alpaca α-mouse IgG3 V _H J _H	Mouse IgG2b
Alpaca α-rabbit IgG V _H J _H	Mouse IgG2c
	Mouse IgG3
	Rabbit IgG

The anti-mouse IgG1 Nano-Secondary is subclass-specific and does not cross-react with IgGs from other commonly used species (here rabbit) and with mouse IgG2b and IgG3 subclasses.



One-step immunostaining is the simultaneous incubation of mouse IgG1 primary antibody and anti-mouse IgG1 Nano-Secondary. This method reduces incubation and hands-on time. Simultaneous incubation also supports multiplexing, tissue penetration, and cell staining for flow cytometry.