

Datasheet for ABIN4368331

## Recombinant anti-RFP antibody (AZDye 568)



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### Overview

|                    |                                                                           |
|--------------------|---------------------------------------------------------------------------|
| Quantity:          | 200 µL                                                                    |
| Target:            | RFP                                                                       |
| Reactivity:        | Discosoma                                                                 |
| Host:              | Alpaca                                                                    |
| Expression System: | E.coli                                                                    |
| Antibody Type:     | Recombinant Antibody                                                      |
| Clonality:         | Monoclonal                                                                |
| Conjugate:         | This RFP antibody is conjugated to AZDye 568                              |
| Application:       | Immunofluorescence (IF), Flow Cytometry (FACS), Immunocytochemistry (ICC) |

### Product Details

|                             |                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Purpose:                    | Camelid sdAb anti-RFP conjugated with AZDye 568 (Alexa Fluor 568 equivalent), Clone 2B12                                         |
| Immunogen:                  | Recombinant protein corresponding to AA 1 to 225 from sea anemone RFP (UniProt Id: Q9U6Y8)                                       |
| Clone:                      | 2B12                                                                                                                             |
| Fragment:                   | single-domain Antibody (sdAb)                                                                                                    |
| Specificity:                | Recognizes most common red fluorescent proteins like mRFP and derivatives like mCherry, mScarlet-i, tdTomato, dsRed and mOrange. |
| Cross-Reactivity (Details): | Does not cross-react with GFP or mTagBFP derivatives.                                                                            |
| Characteristics:            | A dye conjugated alpaca single-domain antibody (sdAb), also referred to as VHH or nanobody.                                      |

## Product Details

It is in the range of 15 kDa and 3 nm in molecular weight and size respectively. This means that sdAbs are ten times lighter and up to 5x smaller than a conventional IgG molecule. They can position a fluorophore up to 20 nm closer to the intended target than using conventional primary-secondary antibody complex detection.

|                 |                                                     |
|-----------------|-----------------------------------------------------|
| Purification:   | Produced in: E.coli                                 |
| Labeling Ratio: | a single fluorophore is coupled to exactly one sdAb |

## Target Details

|                   |                                      |
|-------------------|--------------------------------------|
| Target:           | RFP                                  |
| Alternative Name: | RFP ( <a href="#">RFP Products</a> ) |
| Molecular Weight: | 26 kDa                               |

## Application Details

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application Notes: | Recommended dilution 1:500                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Comment:           | Each fluorophore is coupled to exactly one sdAb, which in turn binds to its target molecule in a monovalent fashion. The high binding affinity and a high coupling efficiency of > 95% guarantees a highly linear relation between target molecule number and fluorescent intensity. This enables you to directly count your target molecule of interest. The fluorophore is located exceptionally close to the recognized epitope (< 1.5 nm), which is ideal for all microscopy techniques. |
| Restrictions:      | For Research Use only                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Handling

|                  |                                                                                                                                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Format:          | Lyophilized                                                                                                                    |
| Reconstitution:  | Reconstitute with 50 % glycerol in deionized water. We recommend including 0.1 % sodium azide as a preservative if applicable. |
| Concentration:   | 5 $\mu$ M                                                                                                                      |
| Buffer:          | lyophilized from PBS pH7.4 with 2% BSA (US-Origin)                                                                             |
| Handling Advice: | Avoid bright light when working with the antibody to minimize photo bleaching of the fluorescent dye.                          |
| Storage:         | -20 °C,-80 °C                                                                                                                  |

Handling

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|                  |                                                                          |
|------------------|--------------------------------------------------------------------------|
| Storage Comment: | Up to 3 months store at -20 °C. Up to 12 months store at -80 °C or below |
| Expiry Date:     | 12 months                                                                |