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# ExoBrite™ CD81 (Mouse/Rat) Flow Antibody



Validated antibody for optimal detection of EV marker CD81 from mouse or rat in purified or bead-bound EVs by flow cytometry.

## Product Description

ExoBrite™ CD81 (Mouse/Rat) Flow Antibody has been validated by Biotium for detection of EV marker CD81 from mouse or rat in isolated EVs. The antibody conjugates offer exceptional signal-to-noise and include color options for the Pacific Blue™, FITC, PE, and APC channels.

- **Proprietary buffer formulation for enhanced signal-to-noise**
- Optimal detection of mouse or rat CD81 EV marker by flow cytometry
- Validated for purified or bead-bound EVs
- Bright signal and low background
- Available in 5 colors

Biotium also offers validated ExoBrite™ Flow Antibodies for tetraspanin proteins CD9, CD63, and other EV markers. The ExoBrite™ Armenian Hamster IgG Isotype Control Flow Antibody can be used as a negative control for this antibody.

**EV antibodies you can trust**

Other commercially available antibodies against mouse and human tetraspanin proteins CD9, CD63, and CD81 are generally not validated for isolated EVs and may require tedious optimization for your EV prep and staining protocol. The antibodies and dye labels of ExoBrite™ Flow Antibody Conjugates were carefully selected and validated for robust detection of isolated EVs. In addition, the antibodies are provided in a proprietary buffer formulation for reduced antibody aggregation and brighter EV staining for optimal accuracy and signal-to-noise. Single-color and 3-color ExoBrite™ CD9/CD63/CD81 Antibody Cocktails for human tetraspanin proteins are also available for high-coverage EV staining or EV phenotyping, respectively.

For general EV staining, Biotium's ExoBrite™ True EV Membrane Stains offer unparalleled coverage of EVs in a sample and address issues of dye aggregation often seen with PKH and other common membrane dyes. Biotium also offers optimized ExoBrite™ EV Surface stains conjugated to cholera toxin B (CTB), wheat germ agglutinin (WGA), and Annexin V. These stains are specially formulated for bright and specific detection of isolated EVs by flow cytometry. These ExoBrite™ EV Surface stains may also be combined with antibody staining, for multi-parameter analysis.

Biotium offers conjugated ExoBrite™ Western Antibodies against human CD9, CD63, and CD81 designed for optimal detection in EV extracts by fluorescent western blot.

**Note:** In our testing, we have found that ExoBrite™ 490/515 dye may bind to streptavidin coated surfaces or beads if free biotin binding sites are not blocked. We recommend performing a biotin blocking step after binding your biotinylated capture antibody to streptavidin beads or surfaces when using ExoBrite™ 490/515 conjugates. Alternatively, consider using a different ExoBrite™ dye for staining EVs captured on streptavidin beads or surfaces.

### Product attributes

| | |
|---|---|
| **Antibody number** | #P019 |
| **SwissProt** | P35762 (mouse), Q62745 (rat) |
| **Antibody type** | ExoBrite™, Primary |
| **Clonality** | Monoclonal |
| **Host species** | Hamster (Cricetinae) |
| **Isotype** | IgG1, kappa |
| **Antibody reactivity (target)** | CD81 |
| **Synonyms** | Target of the antiproliferative antibody 1 (TAPA-1) |
| **Species reactivity** | Mouse, Rat |
| **Human gene symbol** | CD81 |
| **Entrez gene ID** | 12520 (mouse), 25621 (rat) |
| **Molecular weight of antigen** | 26 kDa |
| **Antibody target cellular localization** | Exosomes/EVs, Plasma membrane |
| **Cell/tissue expression** | Exosomes, Hepatocytes, Lymphocytes, Monocytes/macrophages |
| **Verified antibody applications** | Exosome staining (verified) |
| **Shipping condition** | Room temperature |
| **Positive control** | NIH 3T3 cells |
| **Antibody application notes** | Recommended concentration for flow cytometry: 5 uL per 0.1 mL exosomes |
| **Antibody research areas** | Exosomes/EVs |
| **Antibody/conjugate formulation** | Proprietary buffer containing 0.05% sodium azide |
| **Shelf life** | Guaranteed for at least 24 months from date of receipt when stored as recommended |
| **Storage Conditions** | Store at 2 to 8 °C, Protect fluorescent conjugates from light |
| **Regulatory status** | For research use only (RUO) |
| **Product origin** | Product may contain either bovine serum albumin (BSA) from bovine serum (Bos taurus), or recombinant BSA produced in Chinese hamster ovary cells. Inquire for the specific lot. |

# ExoBrite™ CD81 (Mouse/Rat) Flow Antibody

| Antibody | Ex/Em | Target | Species Reactivity | Detection Channel | Catalog No. |
|---|---|---|---|---|---|
| ExoBrite™ 410/450 CD81 (Mouse/Rat) Flow Antibody | 409/452 nm | CD81 | Mouse, Rat | Pacific Blue ™ | P019-410 |
| ExoBrite™ 490/515 CD81 (Mouse/Rat) Flow Antibody | 490/516 nm | CD81 | Mouse, Rat | FITC | P019-490 |
| ExoBrite™ 560/585 CD81 (Mouse/Rat) Flow Antibody | 562/584 nm | CD81 | Mouse, Rat | PE | P019-560 |
| ExoBrite™ 640/660 CD81 (Mouse/Rat) Flow Antibody | 642/663 nm | CD81 | Mouse, Rat | APC | P019-640 |
| ExoBrite™ APC CD81 (Mouse/Rat) Flow Antibody | 651/660 nm | CD81 | Mouse, Rat | APC | P019-APC |

# ExoBrite™ Antibody Target Info

| Target | Relevance in EVs | References for Target in EVs | Antibody |
|---|---|---|---|
| CD9 | Tetraspanin; common EV marker | Kowal et al., 2016; Théry et al., 2018; Spitzberg et al., 2023 | ExoBrite™ CD9 Flow Antibody<br>ExoBrite™ CD9 (Mouse) Flow Antibody<br>ExoBrite™ CD9 Western Antibody |
| CD29 (Integrin beta 1) | Integrin cell surface glycoprotein found on EV surfaces. Has broad tissue expression and commonly found in EV proteomic analysis. | Hoshino et al., 2015; Hazawa et al., 2014; Kugeratski et al., 2021; Spitzberg et al., 2023 | ExoBrite™ CD29 Flow Antibody |
| CD47 | Associates with integrins; regulates trafficking of RNAs into EVs; may contribute to immune evasion on target cells. Has broad tissue expression and commonly found in EV proteomic analysis. | Kamerkar et al., 2017; Li et al., 2022; Kugeratski et al., 2021; Spitzberg et al., 2023 | ExoBrite™ CD47 Flow Antibody |
| CD63 | Tetraspanin; common EV marker | Escola et al., 1998; Kowal et al., 2016; Spitzberg et al., 2023 | ExoBrite™ CD63 Flow Antibody<br>ExoBrite™ CD63 (Mouse) Flow Antibody<br>ExoBrite™ CD63 Western Antibody |
| CD81 | Tetraspanin; common EV marker | Escola et al., 1998; Kowal et al., 2016; Spitzberg et al., 2023 | ExoBrite™ CD81 Flow Antibody<br>ExoBrite™ CD81 (Mouse/Rat) Flow Antibody<br>ExoBrite™ CD81 Western Antibody |
| CD98 (SLC3A2) | Has broad tissue expression and commonly found in EV proteomic analysis. | Mathieu et al., 2021; Liao et al., 2024; Tissot et al., 2024; Kugeratski et al., 2021; Spitzberg et al., 2023 | ExoBrite™ CD98 Flow Antibody |
| Syntenin-1 | Involved in EV biogenesis, plays a role in tumor growth, invasion, and metastasis | Mathieu et al., 2021; Kugeratski et al., 2021; Spitzberg et al., 2023; Baietti et al., 2012 | ExoBrite™ Syntenin-1 Flow Antibody |
| Galectin 3-BP | Secreted protein abundant in EV proteomic studies | | ExoBrite™ Galectin 3-BP Flow Antibody |