# Human RNF43 Antibody

Recombinant Monoclonal Mouse $IgG_1$ Clone # 923227R

Catalog Number: MAB7964

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human RNF43 in direct ELISAs. |
| **Source** | Recombinant Monoclonal Mouse $IgG_1$ Clone # 923227R |
| **Purification** | Protein A or G purified from cell culture supernatant |
| **Immunogen** | Human embryonic kidney cell line HEK293-derived recombinant human RNF43<br>Glu43-Val199<br>Accession # Q68DV7 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS. |

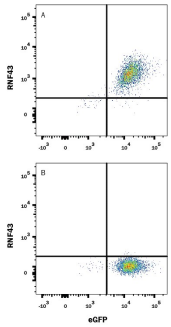
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Flow Cytometry** | 0.25 µg/$10^6$ cells | See Below |
| **CyTOF-ready** | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |

## DATA

### Flow Cytometry




**Detection of RNF43 in HEK293 Human Cell Line Transfected with Human RNF43 and eGFP by Flow Cytometry.** HEK293 human embryonic kidney cell line transfected with either (A) human RNF43 or (B) irrelevant transfectants and eGFP was stained with Mouse Anti-Human RNF43 Monoclonal Antibody (Catalog # MAB7964) followed by APC-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB002). View our protocol for Staining Membrane-associated Proteins.

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.5 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

RING finger protein 43 (RNF43) is a 90 kDa member of the ZNRF3 family of ubiquitin ligase proteins (1, 2). Human RNF43 is synthesized as a 783 amino acid (aa) protein that contains a putative 23 aa signal sequence, a 174 aa extracellular domain (ECD), a transmembrane domain, and a cytoplasmic domain with an atypical RING-type zinc finger (1). RNF43 is expressed in stem cells at the bottom of colon crypts, where it limits the ability of Wnts to induce proliferation (3). RNF43 and ZNRF3, another transmembrane E3 ubiquitin ligase, ubiquitinate and promote the turnover of Frizzled Wnt receptors to antagonize Wnt signaling (3, 4). RNF43 has been shown to suppress both canonical and non-canonical Wnt signaling pathways by distinct mechanisms (5). RNF43/ZNRF3-mediated turnover of Frizzled receptors is inhibited by R-Spondin (4). Dishevelled, a positive regulator of Wnt signaling, interacts with RNF43/ZNRF3 to mediate turnover of Frizzled receptors (6). RNF43 may promote cell survival by binding to NEDL1 and by suppressing the transcriptional activity of p53 (7, 8). RNF43 has been shown both to inhibit and promote cancer. Deletion of RNF43, as well as mutations found in colorectal and other cancers, allows hypersensitivity to Wnts and promotes adenoma formation (3, 9). Furthermore, RNF43 down-regulation in gliomas is associated with poor prognosis (10). However, RNF43 is frequently over-expressed in cancers, correlating with growth-promoting activity and colorectal and hepatocellular cancer pathogenesis (1, 7, 11).

**References:**

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