Human RNF43
Alexa Fluor® 647-conjugated Antibody

Recombinant Monoclonal Mouse IgG_1 Clone # 923227R

Catalog Number: FAB7964R

100 µg

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 Glu43-Val199 Accession # Q68DV7
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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	0.25-1 µg/10^6 cells	HEK293 Human Cell Line Transfected with Human RNF43 and eGFP

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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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