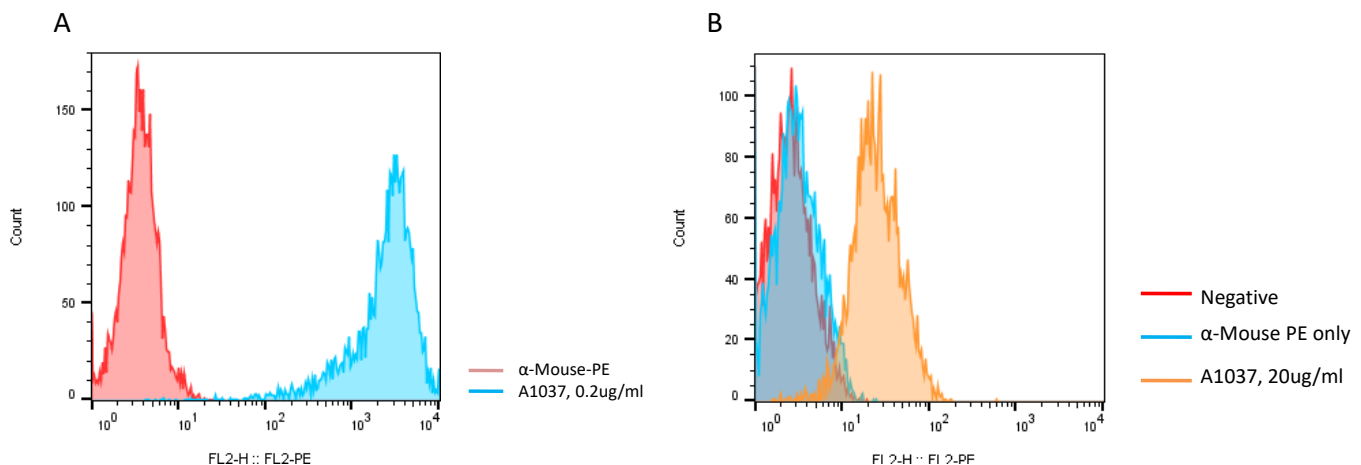


SPECIFICATIONS

Catalog Number	A1037
Product Name	Anti-human RNF43
Source	Purified mouse antibody from hybridoma
Clone Number	R34S5
Species Reactivity	Human
Isotype	Mouse IgG1
Formulation	1xPBS, pH7.0. Sterile
Stability & Storage	1 month at 4°C; 12 months at <-20°C; Avoid repeated freeze-thaw
Purity	>95%
Protein Aggregation	Not obvious on SDS-PAGE
Application	Flow cytometry, ELISA, cell-based assay

DATA

A) Detection of human RNF43 expression on human RNF43-CHO-K1 stable cell line (C3072) using the anti-human RNF43 mIgG1 antibody (Cat. #A1037). B) Detection of human RNF43 expression on human adenocarcinoma cell line HCT-15 using the anti-human RNF43 mIgG1 antibody (Cat. #A1037).



BACKGROUND

RNF43, short for Ring Finger Protein 43, is a significant component in cellular signaling pathways, particularly the Wnt signaling pathway. Recognized as an E3 ubiquitin ligase, RNF43 aids in tagging proteins for degradation. RNF43's primary function lies in regulating cell surface receptors, specifically by targeting Frizzled receptors, which are integral to Wnt signaling, for ubiquitination and subsequent degradation. This activity modulates the Wnt pathway, a critical regulator of cell proliferation, differentiation, and embryonic development. Tissue expression is found throughout the body but particularly in high amounts in the gastrointestinal tract and colon. RNF43 mutations or alterations have been identified in certain cancers, notably in colorectal cancer and some types of gastric cancer. These alterations often result in increased Wnt signaling due to the absence of proper regulation by RNF43, contributing to uncontrolled cell growth and tumorigenesis. Consequently, this has piqued significant interest in RNF43 as a potential therapeutic target for cancer treatment.

References

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- Zebisch M, Xu Y, Krastev C, et al. Structural and molecular basis of ZNRF3/RNF43 transmembrane ubiquitin ligase inhibition by the Wnt agonist R-spondin. *Nat Commun.* **4**:2787. 2013.

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