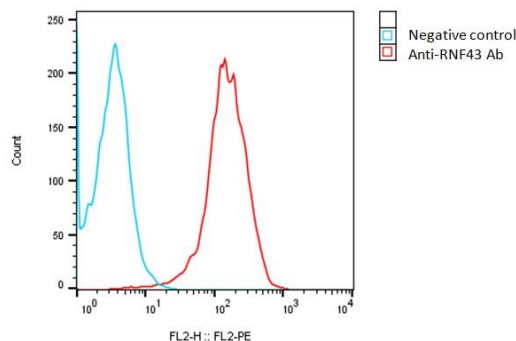


SPECIFICATIONS

Catalog Number	C3072
Cell Line Name	Human RNF43-CHO-K1 stable cell line
Accession Number	NP_001292473.1
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells (2x10 ⁶ per vial)
Culture Medium	DMEM with 10% FBS, 20 µg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of human RNF43 expression on human RNF43-CHO-K1 stable cells using a monoclonal antibody specific for human RNF43 (Invitrogen, Cat. #MA5-30820), followed by staining with PE-anti mouse antibody.


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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