

Recombinant Human RNF43 Protein (His Tag)

Catalog Number: PKSH030501

Note: Centrifuge before opening to ensure complete recovery of vial contents.

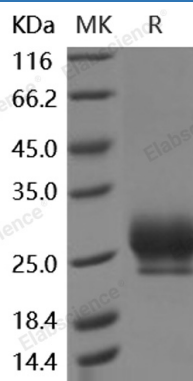
Description

Species	Human
Source	HEK293 Cells-derived Human RNF43 protein Met 1-Tyr197, with an C-terminal His
Calculated MW	20.5 kDa
Observed MW	27&23.8 kDa
Accession	NP_060233.3
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Reconstitution	Please refer to the specific buffer information in the printed manual. Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

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RING finger protein 43 (RNF43) is a 90 kDa member of the ZNRF3 family of ubiquitin ligase proteins. 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. RNF43 is expressed in stem cells at the bottom of colon crypts, where it limits the ability of Wnts to induce proliferation. RNF43 and ZNRF3, another transmembrane E3 ubiquitin ligase, ubiquitinate and promote the turnover of Frizzled Wnt receptors to antagonize Wnt signaling. RNF43 has been shown to suppress both canonical and non-canonical Wnt signaling pathways by distinct mechanisms. RNF43/ZNRF3-mediated turnover of Frizzled receptors is inhibited by R-Spondin. Dishevelled, a positive regulator of Wnt signaling, interacts with RNF43/ZNRF3 to mediate turnover of Frizzled receptors. RNF43 may promote cell survival by binding to NEDL1 and by suppressing the transcriptional activity of p53. 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. Furthermore, RNF43 down-regulation in gliomas is associated with poor prognosis. However, RNF43 is frequently over-expressed in cancers, correlating with growth-promoting activity and colorectal and hepatocellular cancer pathogenesis.

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