



Recombinant Protein Technical Manual

Recombinant Human RNF43 Protein (His Tag)

RPES3438

Product Data:

Product SKU: RPES3438

Size: 50µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_060233.3

Protein Information:

Molecular Mass: 20.5 kDa

AP Molecular Mass: 27 & 23.8 kDa

Tag: C-His

Bio-activity:

Purity: (85.4+12.5) % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg of the protein as determined by the LAL method.

Storage: 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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: RNF124;RNF43;URCC

Immunogen Information:

Sequence: Met 1-Tyr197

Background:

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.