Product Sheet

R Spondin-1 Fc fusion, human recombinant

Catalog # RSPOFC-050; RSPOFC-250; RSPOFC-1000

Description R-spondin-1 is a natural enhancer of the canonical WNT pathway. When used together with WNT proteins that activate the beta-catenin pathway, R-spondin-1 enhances the activity of canonical WNT proteins by binding to LGR5 and LGR4 (refs.)

Injection of recombinant R-Spondin-1 into mouse causes activation of the β-catenin pathway and proliferation of intestinal crypt cells, which forms the basis for a clinical trial in amelioration of chemotherapy-induced colitis.

This product is the full-length R-Spondin-1 fused at its C-terminus to the Fc domain of human IgG1. This fusion increases the stability of the protein in vitro and in vivo without compromising its biological activity. StemRD's R-Spondin-1 Fc fusion protein is produced in human 293 cells as a secreted protein and purified by protein A chromatography.

***Refs**: de Lau, et al, LGR5 homologues associate with Wnt receptors and mediate R-spondin signaling. Nature. 2011 July 4; 476: 293; Carmon, et al, R-spondins function as ligands for the orphan receptors LGR4 and LGR5 to regulate Wnt/beta-catenin signaling. PNAS. 2011 Jul 12; 108: 11452.*

Formulation Lyophilized in sterile filtered solution of PBS.

Reconstitution Before reconstitution, a brief spin is recommend to drive down any material dislodged from the bottom of the tube. The lyophilized protein should be reconstituted in sterile H_2O to a desired concentration.

Stability The lyophilized protein is stable for at least one year if stored at -80 degree C. Reconstituted protein is stable for at least four weeks at 4 degree C, but should be stored in aliquots at -80 degree C for longer term. Avoid repeated freeze and thaw.

Purity Greater than 90% as determined by SDS-PAGE analysis

Biological Activity The activity was determined by using a TCF reporter gene assay in cultured human cells. The EC50 ranges from 5 - 20 ng/ml in the presence of 10 ng/mL human WNT-3a. Activity in other assays should be determined by each individual setting.

Country of Origin USA

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