

RSPO2/R-Spondin 2 Protein, Human (HEK293, Fc)

Cat. No.:	HY-P76582
Synonyms:	R-spondin-2; Roof plate-specific spondin-2; RSPO2
Species:	Human
Source:	HEK293
Accession:	Q6UXX9 (M1-G205)
Gene ID:	340419
Molecular Weight:	Approximately 50 kDa

PROPERTIES

Biological Activity	Measured by its ability to induce activation of β -catenin response in a Topflash Luciferase assay using HEK293T human embryonic kidney cells and the ED ₅₀ is typically 2-12 ng/mL in the presence of 5 ng/mL mouse Wnt3a.
Appearance	Solution.
Formulation	Supplied as a 0.2 μ m filtered solution of Histidine, Arginine, 120 mM NaCl, 0.02% Tween 80, 5% sucrose, pH 6.0.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

RSPO2, a pivotal activator of the canonical Wnt signaling pathway, functions as a ligand for LGR4-6 receptors, particularly LGR4, LGR5, or LGR6. Upon binding to these receptors, the resultant complex associates with phosphorylated LRP6 and frizzled receptors, which are activated by extracellular Wnt receptors. This interaction triggers the canonical Wnt signaling pathway, leading to the increased expression of target genes. Additionally, RSPO2 serves as a regulator of both the canonical Wnt/ β -catenin-dependent pathway and the non-canonical Wnt signaling by acting as an inhibitor of ZNRF3, a crucial regulator of the Wnt signaling pathway. Notably, during embryonic development, RSPO2 plays a crucial role in limb specification by amplifying the Wnt signaling pathway independently of LGR4-6 receptors. This amplification occurs, possibly by RSPO2 acting as a direct antagonistic ligand to RNF43 and ZNRF3, thereby governing the number of limbs an embryo should form. RSPO2 interacts with WNT1, binds heparin, and interacts with LGR4, LGR5, and LGR6. Furthermore, RSPO2 engages with the E3 ubiquitin ligases RNF43 and ZNRF3, indicating its involvement in the intricate regulatory network of the Wnt signaling pathway.

Caution: Product has not been fully validated for medical applications. For research use only.

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