

R-Spondin 2/RSPO2 Protein, Mouse, Recombinant (mFc)

General Information

Synonyms:	D430027K22;ftls;AA673245;2610028F08Rik;R-spondin 2
Protein Construction:	A DNA sequence encoding the mouse Rspo2 (NP_766403.1) (Met1-Gly205) was expressed with the Fc region of mouse IgG1 at the C-terminus. Predicted N terminal: Asn 24
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q8BFU0
Molecular Weight:	47.4 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

R-spondin-2, also known as RSPO2, synergizes with Wnt to activate beta-catenin. RSPO2 is secreted proteins that regulate beta-catenin signaling. Activator of the beta-catenin signaling cascade leads to TCF-dependent gene activation. Action both in the canonical Wnt / beta- catenin-dependent pathway, possibly via a direct interaction with Wnt proteins, and in a Wnt-independent beta catenin pathway through a receptor signaling pathway that may not use frizzled / LRP receptors. Probably also acts as a ligand for frizzled and LRP receptors. The encoding

gene Rspo2 was identified as a novel common integration site for the mouse mammary tumor virus in viral induced mouse mammary tumors. Rspo2 and Rspo2 / Wnt1 tumors contained many spindle cells, consistent with an epithelial-mesenchymal transformation phenotype. When Rspo2 and Rspo2 / Wnt1 tumor cells were transferred into naive mice, they exhibited greater metastatic activity than cells derived from Wnt1 tumors.

Reference

Cadiou E, et al. (2009) Coat Variation in the Domestic Dog Is Governed by Variants in Three Genes. *Science*. 326: 150-153.

Kazanskaya O, et al. (2004) R-Spondin2 is a secreted activator of Wnt / beta-catenin signaling and is required for *Xenopus* myogenesis. *Dev Cell*. 7(4): 525-34.

Parker HG, et al. (2010) An insertion in the RSP02 gene correlates with improper coat in the Portuguese water dog. *J Hered*. 101(5):612-7.

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