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Product Information

Agrin, human
recombinant, expressed in human HEK 293 cells
cell culture tested

Catalog Number **SAE0095**
Storage Temperature –20 °C

Synonym: AGRN

Product Description

Agrin is a large extracellular heparan sulfate proteoglycan that is involved in the formation of the neuromuscular junction.[1] Agrin triggers the aggregation of acetylcholine receptors via the muscle-specific kinase (MuSK)[2,3] and the low-density lipoprotein receptor-related protein 4 (Lrp4) receptor complex.[4] Agrin is required for the full regenerative capacity of neonatal mouse hearts.[1]

Recombinant agrin has been shown *in vitro* to promote cardiomyocyte proliferation, as studied in mouse-induced and human-induced pluripotent stem cells. Recombinant agrin has been shown *in vivo* to promote cardiac regeneration, after induction of myocardial infarction in adult mice.[1]

UniProt accession number: O00468

Human, recombinant Agrin, C-terminal, is expressed in human HEK 293 cells as a glycoprotein with a calculated molecular mass of 87 kDa (amino acids $Ala^{1,260}$-$Pro^{2,045}$ with an N-terminal His tag). The DTT-reduced protein migrates as a ~100 kDa polypeptide on SDS-PAGE because of glycosylation.

This protein is produced in human cells, without the use of serum and is lyophilized from a 0.22 μm-filtered solution in PBS. The human cells expression system allows human-like glycosylation and folding, and often supports higher specific activity of the protein.

The biological activity of this recombinant human agrin measures in culture the ability of immobilized agrin to support adhesion of PC12 cells.

Purity: ≥95% (SDS-PAGE)

Endotoxin level: ≤0.1 EU/μg agrin (LAL)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Briefly centrifuge the vial before opening. Reconstitute in water to a concentration of 0.1 mg/mL. Do not vortex. This solution can be stored at 2–8 °C for up to 1 week. For extended storage, it is recommended to store in working aliquots at –20 °C.

Storage/Stability

Store the lyophilized product at –20 °C. The product is stable for at least 2 years as supplied.

References

1. Bassat, E. *et al.*, *Nature*, **547(7662)**, 179-184 (2017).
2. Rupp, F. *et al.*, *Neuron*, **6(5)**, 811-823 (1991).
3. Glass, D.J. *et al.*, *Cell*, **85(4)**, 513-523 (1996).
4. Burden, S.J. *et al.*, *Cold Spring Harb. Perspect. Biol.*, **5(5)**, a009167 (2013).

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