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# Recombinant Rat Agrin protein (rFc Tag) (HPLC verified)

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Catalog Number: Eg3412

## Basic Information

**Species:**
Rat

**Purity:**
>90 %, SDS-PAGE<br> >90 %, SEC-HPLC

**Tag:**
rFc Tag

## Technical Specifications

**Purity:**
>90 %, SDS-PAGE<br> >90 %, SEC-HPLC

**Endotoxin Level:**
<0.1 EU/ μ g protein, LAL method

**Source:**
HEK293-derived Rat Agrin protein Ala1153-Pro1948 (Accession# P25304-4) with a rabbit IgG Fc tag at the N-terminus.

**GeneID:**
25592

**Accession:**
P25304-4

**Predicted Molecular Mass:**
112.4 kDa

**SDS-PAGE:**
100-140 kDa, reducing (R) conditions

**Formulation:**
Lyophilized from 0.22 μ m filtered solution in PBS, pH 7.4. Normally 5% trehalose and 5% mannitol are added as protectants before lyophilization.

## Biological Activity

Not tested

## Storage and Shipping

**Storage:**
It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

- Until expiry date, -20℃ to -80℃ as lyophilized proteins.
- 3 months, -20℃ to -80℃ under sterile conditions after reconstitution.

**Shipping:**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

## Reconstitution

Briefly centrifuge the tube before opening. Reconstitute at 0.1-0.5 mg/mL in sterile water.

## Background

Rat Agrin is a large proteoglycan secreted by motor neurons, muscle cells, and others, and serves as a key component of the extracellular matrix. As the central organizer of neuromuscular junction formation, it efficiently clusters acetylcholine receptors on the postsynaptic membrane by binding to the LRP4/MuSK receptor complex, thereby driving the development and maturation of neuromuscular synapses. Beyond the nervous system, Agrin is also involved in regulating myotube formation, cardiac regeneration, and stem cell differentiation. Studies have shown that exogenous Agrin protein can promote axonal regeneration after spinal cord injury and induce dedifferentiation and proliferation of cardiomyocytes, demonstrating strong tissue repair potential. Consequently, Agrin has emerged as a highly promising therapeutic protein molecule in the fields of neural and cardiac regeneration.

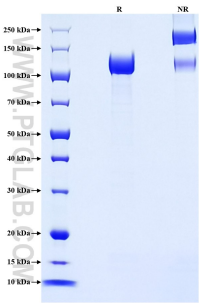
## References


1. Bassat, Elad et al. Nature vol. 547,7662 (2017): 179-184.
2. Mokhtari, Reza Bayat et al. Advanced science (Weinheim, Baden-Wurttemberg, Germany) vol. 12,20 (2025): e241
3. Li, Xiang et al. International journal of molecular medicine vol. 54,5 (2024): 98.
4. Yu Lin, Melissa Ong et al. The Journal of investigative dermatology vol. 145,1 (2025): 155-170.e2.

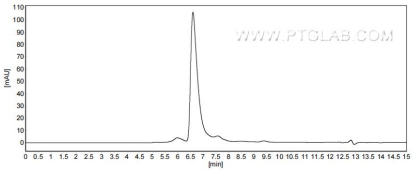

## Synonyms

Agrin C-terminal 110 kDa subunit, Agrin C-terminal 22 kDa fragment, Agrin C-terminal 90 kDa fragment, Agrin N-terminal 110 kDa subunit, Agrn

## Selected Validation Data




Purity of Recombinant Rat Agrin was determined by SDS-PAGE. The protein was resolved in an SDS-PAGE in reducing (R) and non-reducing (NR) conditions and stained using Coomassie blue.




The purity of Rat Agrin was greater than 90% as determined by SEC-HPLC.