

PRODUCT INFORMATION



Adrenomedullin (human, recombinant)

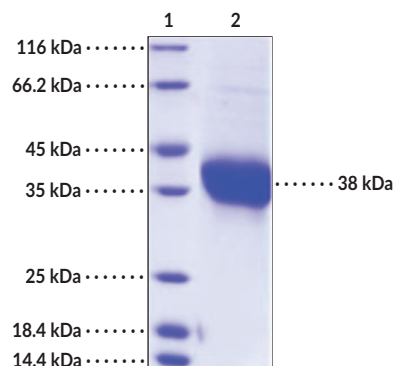
Item No. 38058

Overview and Properties

Synonyms: ADM, AM
Source: Recombinant N-terminal human IgG1 Fc-tagged adrenomedullin expressed in HEK293 cells
Amino Acids: 95-146
Uniprot No.: P35318
Molecular Weight: 38 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥93% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Adrenomedullin

SDS-PAGE Analysis of Adrenomedullin. This protein has a calculated molecular weight of 38 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Adrenomedullin is a vasodilatory peptide hormone and member of the calcitonin peptide family encoded by *ADM* in humans, with roles in vasodilation, angiogenesis, inflammation, organ protection, and tissue repair.¹⁻³ *ADM* codes for a 185-amino acid precursor, proadrenomedullin (preproAM), which is converted to proadrenomedullin (proAM) after cleavage of a signal peptide.³ proAM is then enzymatically processed to generate both adrenomedullin and proAM N-terminal 20 peptide (PAMP). Adrenomedullin is expressed in the adrenal medulla, heart, lung, and kidney as well as human umbilical vein endothelial cells (HUVECs) and in human glomerular epithelial and hematopoietic cell lines.¹ It is also expressed in pheochromocytomas, neuroendocrinal tumors of the adrenal gland. It is protective against mechanical ventilation-induced lung injury and sepsis, as well as liver and gut injury induced by ventilator-induced lung injury in a mouse model of pneumococcal pneumonia infection.⁴ Adrenomedullin increases survival and reduces chemotherapy-induced cardiotoxicity in mice.⁵ It also reduces hyperoxia-induced right ventricular hypertrophy and artery thickness in a rat model of bronchopulmonary dysplasia.¹ Cayman's Adrenomedullin (human, recombinant) protein is a disulfide-linked homodimer. The reduced monomer, composed of adrenomedullin (amino acids 95-146) fused to human IgG1 Fc at its N-terminus, consists of 340 amino acids and has a calculated molecular weight of 38 kDa.

References

1. García-Ponce, A., Chánez Paredes, S., Castro Ochoa, K.F., *et al.* Regulation of endothelial and epithelial barrier functions by peptide hormones of the adrenomedullin family. *Tissue Barriers* **4(4)**, e1228439 (2016).
2. Lippton, H., Chang, J.K., Hao, Q., *et al.* Adrenomedullin dilates the pulmonary vascular bed *in vivo*. *J. Appl. Physiol.* **76(5)**, 2154-2156 (1994).
3. Martínez-Herrero, S. and Martínez, A. Adrenomedullin: Not just another gastrointestinal peptide. *Biomolecules* **12(2)**, 156 (2022).
4. Müller-Redetzky, H.C., Will, D., Hellwig, K., *et al.* Mechanical ventilation drives pneumococcal pneumonia into lung injury and sepsis in mice: Protection by adrenomedullin. *Crit. Care* **18(2)**, R73 (2014).
5. Yoshizawa, T., Takizawa, S., Shimada, S., *et al.* Effects of adrenomedullin on doxorubicin-induced cardiac damage in mice. *Biol. Pharm. Bull.* **39(5)**, 737-746 (2016).

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