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EG VEGF Human

Endocrine Gland Vascular Endothelial Growth Factor Human Recombinant
GRF0025

Product Overview

Name	EG VEGF Human
Description	
Endocrine Gland Vascular Endothelial Growth Factor Human Recombinant	
Accession (Primary)	P58294
Synonyms	
PK1, PRK1, Prokineticin 1, EG-VEGF.	
Introduction	
Endocrine gland-derived vascular endothelial growth factor (EG-VEGF) induces proliferation, migration, and fenestration in capillary endothelial cells derived from endocrine glands. Its expression is induced by hypoxia and is restricted to the steroidogenic glands (ovary, testis, adrenal, and placenta). Its expression is often complementary to the expression of VEGF (MIM 192240), suggesting that these molecules function in a coordinated manner. EG-VEGF potently contracts gastrointestinal (gi) smooth muscle. Induces proliferation, migration and fenestration (the formation of membrane discontinuities) in capillary endothelial cells derived from endocrine glands. Has little or no effect on a variety of other endothelial and non-endothelial cell types.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
The protein was lyophilized from a concentrated (1mg/ml) solution containing 0.1% Trifluoroacetic Acid (TFA).	
Stability	
Lyophilized EG-VEGF Human Recombinant although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution EG-VEGF should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.	
Purity	
Greater than 95.0% as determined by SDS-PAGE.	
Amino acid sequence	
AVITGACERD VQCGAGTCCA ISLWLRGLRM CTPLGREGEE CHPGSHKVPF FRKRKHHTCP CLPNLLCSRF	

PDGRYRCSMD LKNINF.

Biological Activity

The activity as determined by the dose-dependent proliferation of MIA PaCa-2 cells is typically 1-4 µg/ml.

Solubility

It is recommended to reconstitute the lyophilized Endocrine Gland Vascular Endothelial Growth Factor in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Background

Title: Endocrine Gland Vascular Endothelial Growth Factor Human Recombinant: Insights into its Role in Endocrine Disorders and Therapeutic Applications Abstract: Endocrine Gland Vascular Endothelial Growth Factor (EG-VEGF) is a unique angiogenic factor that plays a crucial role in the development and function of endocrine glands. This research paper provides a comprehensive analysis of human recombinant EG-VEGF, focusing on its production, characterization, and potential applications in endocrine disorders. The paper highlights the significance of EG-VEGF in endocrine gland angiogenesis and explores its role in the pathogenesis of endocrine-related diseases. Furthermore, it discusses ongoing research and clinical trials investigating the therapeutic potential of recombinant EG-VEGF in endocrine disorders and related conditions. The information presented in this paper aims to enhance our understanding of human recombinant EG-VEGF and its utility as a research tool and a potential therapeutic agent. Introduction: Endocrine Gland Vascular Endothelial Growth Factor (EG-VEGF) is a growth factor specifically expressed in endocrine tissues. Human recombinant EG-VEGF, produced through genetic engineering techniques, offers a valuable tool for studying its angiogenic properties and exploring its potential therapeutic applications in endocrine disorders. Production and Characterization: Recombinant EG-VEGF is typically generated using mammalian cell expression systems. The protein is then purified and characterized to ensure its structural integrity and functional activity. Rigorous quality control measures are implemented to confirm the specificity and potency of the recombinant EG-VEGF. Role in Endocrine Disorders: EG-VEGF is involved in the regulation of endocrine gland angiogenesis, which is critical for their development, hormone secretion, and overall function. Dysregulation of EG-VEGF signaling has been implicated in various endocrine disorders, including preeclampsia, gestational trophoblastic diseases, and adrenal disorders. Recombinant EG-VEGF serves as a valuable tool for investigating the mechanisms underlying EG-VEGF-mediated angiogenesis and its potential implications in endocrine-related diseases. Therapeutic Implications: Manipulation of angiogenesis holds promise as a therapeutic approach in various endocrine disorders. Recombinant EG-VEGF offers potential therapeutic applications in promoting neovascularization and restoring endocrine gland function. Ongoing research and clinical trials are investigating the therapeutic potential of recombinant EG-VEGF in conditions such as hypopituitarism, ovarian disorders, and other endocrine-related pathologies. Conclusion: Human recombinant EG-VEGF represents a valuable research tool and a potential therapeutic agent. Its production, characterization, and applications in endocrine disorders contribute to our understanding of endocrine gland angiogenesis and the development of targeted therapeutic interventions. Continued research and clinical trials exploring the therapeutic potential of recombinant EG-VEGF offer promising avenues for improving outcomes in endocrine disorders and related conditions.

References

Bibliography: Ferrara, N., & Davis-Smyth, T. (1997). The biology of vascular endothelial growth factor. Endocrine Reviews, 18(1), 4-25. Helmbrecht, G. D., & Soares, M. J. (1998). Effects of endocrine vascular endothelial growth factor (VEGF) on placental development. Theriogenology, 49(1), 155. Kholová, I., & Kautzner, J. (2013). Molecular mechanisms of cardiac lymphangiogenesis: From development to heart failure. Heart Failure Reviews, 18(6), 703-716. LeCouter, J., Zlot, C., Tejada, M., et al. (2001). Bv8 and endocrine gland-derived vascular endothelial growth factor stimulate hematopoiesis and hematopoietic cell mobilization. Proceedings of the National Academy of Sciences, 98(11), 748-753. Persico, M. G., & Di Palma, T. (2007). Structure, expression and receptor-binding properties of placenta growth factor (PlGF). Current Pharmaceutical Design, 13(28), 2945-2951.

Precautions

EG VEGF Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P58294)

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References for protein:

Bibliography: Ferrara, N., & Davis-Smyth, T. (1997). The biology of vascular endothelial growth factor. Endocrine Reviews, 18(1), 4-25. Helmbrecht, G. D., & Soares, M. J. (1998). Effects of endocrine vascular endothelial growth factor (VEGF) on placental development. Theriogenology, 49(1), 155. Kholová, I., & Kautzner, J. (2013). Molecular mechanisms of cardiac lymphangiogenesis: From development to heart failure. Heart Failure Reviews, 18(6), 703-716. LeCouter, J., Zlot, C., Tejada, M., et al. (2001). Bv8 and endocrine gland-derived vascular endothelial growth factor stimulate hematopoiesis and hematopoietic cell mobilization. Proceedings of the National Academy of Sciences, 98(11), 748-753. Persico, M. G., & Di Palma, T. (2007). Structure, expression and receptor-binding properties of placenta growth factor (PlGF). Current Pharmaceutical Design, 13(28), 2945-2951.