PTD-DBM

Purity: >98% I Molecular Formula: C124H22N61028S2
Molecular Weight: 3082.65 I Sequence: RRRRRRRRGGGGRKTGHQICKFRKC

DESCRIPTION:

PTD.-DBM is a topical hair product which helps activate the Wnt-Beta-catenin pathway via inhibition of CXXC5. This articular pathway has been proven to help rescue DHT induced hair follicle miniaturization. CXXC-type zinc finger protein 5 (CXXC5) is a negative regulator of the Wnt/13-catenin pathway which has been associated with hair restoration and wound healing. Follicle development and formation can impeded by CXXC5 binding with the protein Dishevelled.

PTD-DBM is a very created peptide which interferes with the binding process of CXXC5 and Dishevelled. Studies have proven that PTD-DBM is significantly more effective at inducing hair neogenesis when combined with Valproic Acid, which stimulates the Wnt/13-catenin pathway when applied topically. This combination should be applied post-microneedling to take advantage of the follicle development that is induced naturally by the wound healing process.

PROTOCOL:

Content & Potency: 0.1% in cosmetic dropper provided as a 25ml bottle
Suggested dosage: Apply 0.8-1ml (1 dropper) topically to area of intended hair regrowth once daily

CLINICAL RESEARCH:

CXXC5 is a negative-feedback regulator of the Wnt/ 13-catenin pathway involved in Osteoblast differentiation

The positive roles of the Wnt/ 13-catenin pathway in osteoblast differentiation and bone mineral density (BMD) maintenance have been clearly demonstrated in both animal experiments and clinical investigations. CXXC finger protein 5 (CXXC5), a recently identified negative regulator of the Wnt/ **13-catenin** pathway, showed altered cellular localization and function, which were dependent on the cell type in previous studies. However, the in vivo function of CXXC5 has not been clearly investigated yet. Here, we characterized CXXC5 as a negative regulator of osteoblast differentiation and bone formation. Deficiency of CXXC5 resulted in elevated BMD in mice without any severe gross developmental abnormalities. CXXC5 exerted a negative-feedback effect on the Wnt/ f3-catenin pathway via Wnt-dependent binding to Dishevelled (Dvl) during osteoblast differentiation. Suppression of the Dvl—CXXC5 interaction using a competitor peptide resulted in the activation of the Wnt/ 13-catenin pathway and osteoblast differentiation, and accelerated thickness growth of ex vivo-cultured calvariae. Overall, CXXC5 is a negative-feedback regulator induced by Wnt/ 13-catenin signaling that inhibits osteoblast differentiation and bone formation via interaction with Dvl.

CXXC5 is a negative-feedback regulator of the Wnt/ 0-catenin pathway involved in osteoblast differentiation

Kim, Hyun-Yi & Yoon, Juyong & Yun, J-H & Cho, K-W & Lee, S-H & Rhee, Yumie & Jung, H-S & Lim, Hwan Jung & Lee, Hyuk & Choi, J & Heo, J-N & Lee, W & No, Kyoung Tai & Min, D & Choi, K-Y. (2015). CXXC5 is a negative-feedback regulator of the Wnt/ 13-catenin pathway involved in osteoblast differentiation. Cell death and differentiation. 22.