Recombinant Human KLK-4 / Kallikrein-4 Protein (His tag)

Cat.NO.: TP07300

3th Edition

Synonyms:AI2A1;ARM1;EMSP;EMSP1;kallikrein;KLK-L1;PRSS17;PSTS

Description: Kallikrein-4, also known as Enamel matrix serine proteinase 1, Kallikrein-like protein 1, KLK-L1, Serine protease 17, KLK4, PRSS17 and EMSP1, is a secreted protein which belongs to the peptidase S1 family and Kallikrein subfamily. Kallikrein-4 / KLK4 is a serine protease expressed during enamel maturation, and proteolytic processing of the enamel matrix by KLK4 is critical for proper enamel formation. Kallikrein-4 / KLK4 contains one peptidase S1 domain. Kallikrein-4 / KLK4 is secreted by transition- and maturation-stage ameloblasts. KLK4 aggressively degrades the retained organic matrix following the termination of enamel protein secretion. Two proteases are secreted into the enamel matrix of developing teeth. The early protease is enamelysin (MMP-20). The late protease is kallikrein 4 (KLK4). The principle functions of MMP-20 and KLK4 in dental enamel formation are to facilitate the orderly replacement of organic matrix with mineral, generating an enamel layer that is harder, less porous, and unstained by retained enamel proteins. Defects in Kallikrein-4 / KLK4 are the cause of amelogenesis imperfecta hypomaturation type 2A1 (AI2A1) which is an autosomal recessive defect of enamel formation. The disorder involves both primary and secondary dentitions.

Form:PBS

Molecular Weight:25.8 kDa

Sequences: Met 1-Ser 254

Purity:> 95% by HPLC

Concentration:

Endotoxin Level:<1.0 EU per 1 ug of protein (determined by LAL method)

Storage: Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.