Thrombospondin

Thrombospondins are a family of secreted glycoproteins with antiangiogenic functions. Due to their dynamic role within the extracellular matrix they are considered matricellular proteins.

The first member of the family, thrombospondin 1 (THBS1), was discovered in 1971 by Nancy L. Baenziger.

A disintegrin and metalloproteinase with thrombospondin motifs 4 is an enzyme that in humans is encoded by the ADAMTS4 gene.

This gene encodes a member of the ADAMTS (a disintegrin and metalloproteinase with thrombospondin motifs) protein family. Members of the family share several distinct protein modules, including a propeptide region, a metalloproteinase domain, a disintegrin-like domain, and a thrombospondin type 1 (TS) motif. Individual members of this family differ in the number of C-terminal TS motifs, and some have unique C-terminal domains. The enzyme encoded by this gene lacks a C-terminal TS motif. It can degrade aggrecan, a major proteoglycan of cartilage, brevican, a brain-specific extracellular matrix protein, neurocan and versican. The cleavage of aggrecan and brevican suggests key roles of this enzyme in arthritic disease and in the central nervous system, potentially, in the progression of glioma.

see ADAMTS4.