IL-1β INHIBITOR COMPOSITION AND USE THEREOF

ABSTRACT

A therapeutic composition is described that can be used for treating or prevention of diseases association with modulation of activity of human IL-1β. In certain aspects, the disclosed invention is based, on engineering of a heterodimeric protein assembly that is capable of binding to human IL-1β and attenuating its function. The heterodimeric protein assembly comprises an extracellular portions of human IL1-R1 and of human IL-1RAcP, or their functional fragments. Each, the IL1-R1 portion and the IL-1RAcP portion, is fused to a distinct mutant of Fc portion of the human Ig Gamma-1. The two distinct Fc mutants in the heterodimeric protein assembly are engineered as to favor the heteromeric dimer formation between the two Fc mutants over any homomeric assembly. DNA expression vectors and expression systems for overproducing the polypeptides in mammalian cells are also provided for.

Figure 1