



Inhibitor

For research use only. Not for clinical diagnosis.

Catalog No. KN-NIGU-M01

Human IL-1 Receptor-Ig heterodimer-containing medium for IL-1 inhibition

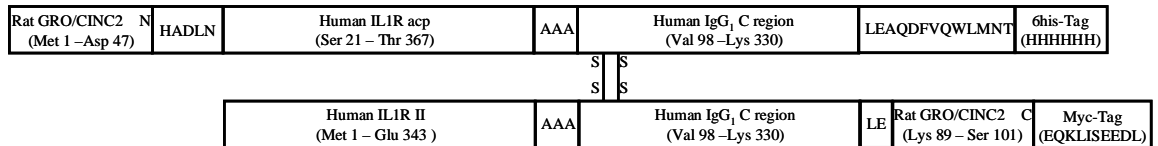
Background

Interleukin-1 (IL-1 α and IL-1 β) is a proinflammatory cytokine involved in immune responses including both innate and acquired immunity. IL-1 is thought to play a role in many diseases, including arthritis, heart disease, pancreatitis, multiple myeloma, and stroke. IL-1 receptor (IL1R) I, also known as CD121a, is an 80 kDa type I transmembrane (TM) protein that binds cytokines IL1 α and IL1 β and transduces a signal. Whereas IL1RII, also known as CD121b, is a 65 kDa protein that binds cytokines IL1 α and IL1 β but does not transduce a signal. Signal transduction requires complex formation with the IL1R accessory protein (IL1R acp), another type I TM protein. Soluble IL1R acp and soluble IL-1RII is present in normal serum and soluble form of the IL-1 receptor accessory protein (acp) increases the affinity of binding of IL-1 α and IL-1 β to the soluble IL1RII 1). Inhibition of IL-1 is beneficial in many animal models of disease and is expected to offer a new therapy for various human diseases.

- 1) Smith DE, Hanna R, Della F, Moore H, Chen H, Farese AM, MacVittie TJ, Virca GD and Sims JE: The soluble form of IL-1 receptor accessory protein enhances the ability of soluble type II IL-1 receptor to inhibit IL-1 action. *Immunity* 18: 87-96, 2003.

Product type Recombinant Protein / Inhibitor of human IL-1

Source



Condition medium (RPMI 1640, 10%FBS, 100 unit/ml penicillin, 100 μ g/ml streptomycin) was obtained from Cos-7 cells cotransfected with pCAGGS- Rat GRO/CINC2 α N- Human IL-1R acp- Human IgG1Fc- 6His and pCAGGS- Human IL-1R II- Human IgG1 Fc- Rat GRO/CINC2 α C- Myc by Eugene 6 (Roche, Indianapolis, IN). It was filtered by Millex-GV Filter Unit, 0.22 μ m (Millipore, Billerica, MA). It contains not only human IL-1R-Ig heterodimer but also IL-1R acp- IgG1Fc homodimer and IL-1R II- IgG1Fc homodimer. However, IL-1 inhibition effect by IL-1R-Ig heterodimer is much stronger than that by their homodimers. MOCK medium was obtained from them trasfected with pCAGGS.

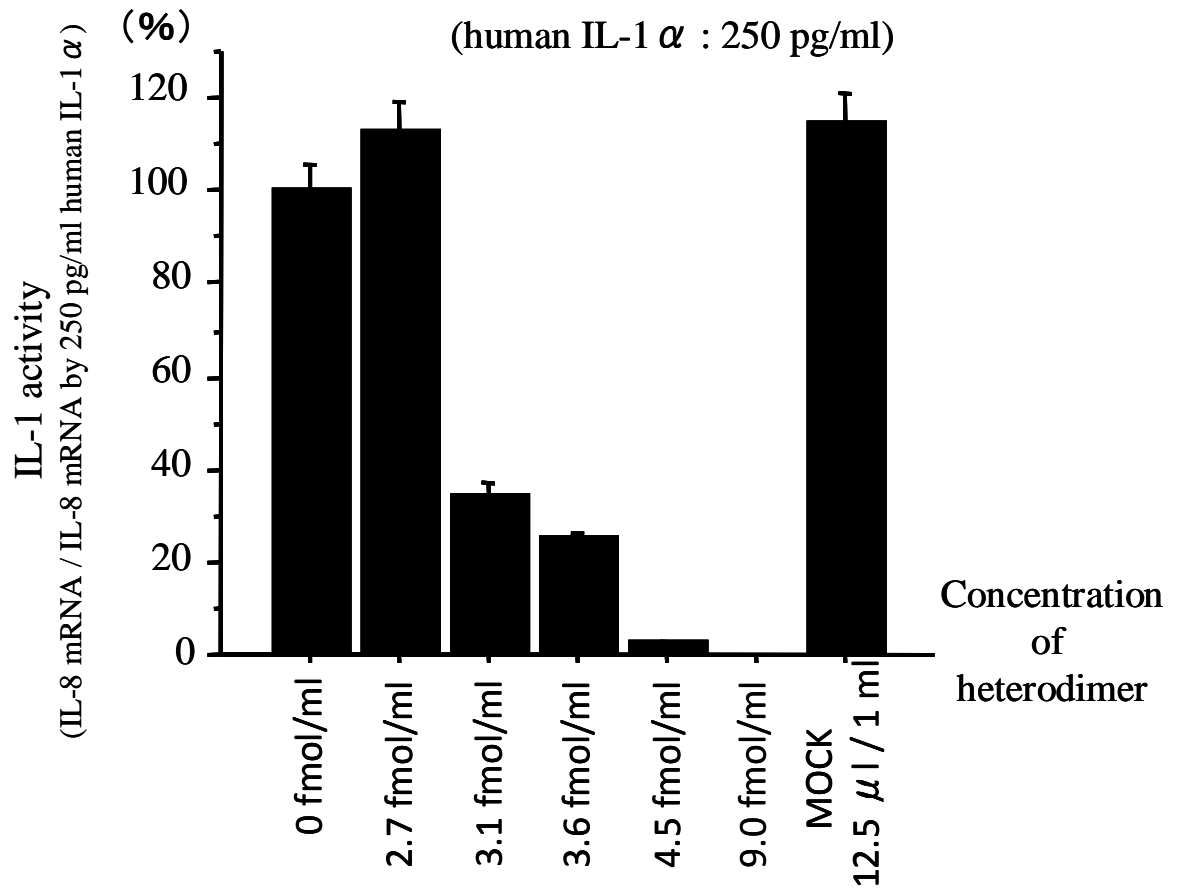
Form Liquid (control medium is attachd)

Volume/ 500 μ l / tube, Human IL-1R-Ig heterodimer 360 fmol/ml

Concentration Concentration of Human IL-1R-Ig heterodimer in condition medium, which is measured by Rat GRO/CINC2 α ELISA kit (IBL, Takasaki, Japan), is approximately 360 fmol/mL.

Activity Measured by its ability to inhibit IL-8 gene expression in MRC-5 cell (human lung fibroblast) after culture for 24 hr with rhIL-1 α and the condition medium. Medium contained approximately 3.6 fmol/mL and 4.5 fmol/mL of human IL-1R-Ig heterodimer-containing medium will inhibit 75% and 97% , respectively, of the biological response due to 250 pg/mL of rhIL-1 α . ID50; 3.0 fmol/ml. MOCK medium will not inhibit it.

Human IL-1 Receptor-Ig heterodimer-containing medium for IL-1 inhibition



Storage

Store below -20°C (below -70°C for prolonged storage).
Aliquot to avoid cycles of freeze/thaw.

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