

37-1216: Human HMGB1 / HMG1 Recombinant Protein (His Tag)(Discontinued)

Reactivity : Human

Alternative Name : HMG-1 Protein, HMG1 Protein, HMG3 Protein, SBP-1 Protein,

Description

Source : E. coli

High-mobility group box 1 protein (HMGB1), also known as HMG-1 or amphoterin previously, is a member of the HMGB family consisting of three members, HMGB1, HMGB2 and HMGB3. HMGB1 is a DNA-binding nuclear protein, released actively following cytokine stimulation as well as passively during cell death. It is the prototypic damage-associated molecular pattern (DAMP) molecule and has been implicated in several inflammatory disorders. HMGB1 signals via the receptor for advanced glycation end-product (RAGE) and members of the toll-like receptor (TLR) family. The most prominent HMGB1 protein and mRNA expression arthritis is present in pannus regions, where synovial tissue invades articular cartilage and bone. HMGB1 promotes the activity of proteolytic enzymes, and osteoclasts need HMGB1 for functional maturation. As a non-histone nuclear protein, HMGB1 has a dual function. Inside the cell, HMGB1 binds DNA, regulating transcription and determining chromosomal architecture. Outside the cell, HMGB1 can serve as an alarmin to activate the innate system and mediate a wide range of physiological and pathological responses. Extracellular HMGB1 represents an optimal "necrotic marker" selected by the innate immune system to recognize tissue damage and initiate reparative responses. However, extracellular HMGB1 also acts as a potent pro-inflammatory cytokine that contributes to the pathogenesis of diverse inflammatory and infectious disorders. HMGB1 has been successfully therapeutically targeted in multiple preclinical models of infectious and sterile diseases including arthritis. As shown in studies on patients as well as animal models, HMGB1 can play an important role in the pathogenesis of rheumatic disease, including rheumatoid arthritis, systemic lupus erythematosus, and polymyositis among others. In addition, enhanced postmyocardial infarction remodeling in type 1 diabetes mellitus was partially mediated by HMGB1 activation.

Product Info

Amount : Human HMGB1 / HMG1 Recombinant Protein (His Tag)(Discontinued) / 50 µg

Purification : > 90 % as determined by SDS-PAGE

Content : Formulation Lyophilized from sterile PBS, 20% Glycerol, pH 7.4.
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Storage condition : Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Amino Acid : Met1-Thr332

Application Note

Immobilized human His-HMGB1 at 10 Åµg/ml (100 ÅµL/well) can bind AGER-Fc with a linear range of 0.31-2.5 Åµg/ml.

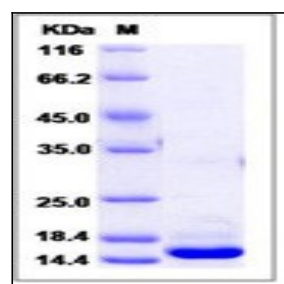


Fig 1: Human HMGB1 / HMG1 Recombinant Protein (His Tag)