

UJI HEMAGLUTINASI PROTEIN PILLI *Salmonella typhi* BA 07.4 TERHADAP SEL DARAH MERAH MANUSIA DAN DOMBA

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ABSTRAK

Pilli pada bakteri *Salmonella typhi* tersusun dari protein pillin, berfungsi sebagai mediator penting dalam proses adhesi dengan permukaan sel inang. Ikatan protein pilli dengan permukaan sel inang menentukan sensitivitas respon imunologi inang terhadap antigen. Tujuan penelitian ini adalah untuk menentukan aktivitas hemaglutinasi protein pilli pada *S. typhi* terhadap sel darah merah manusia golongan darah ABO serta terhadap sel darah merah domba. Metode penelitian dilakukan tiga tahap; pertama, penanaman bakteri menggunakan media bifasik (BHI agar dan BHI cair); kedua, isolasi protein pilli dengan metode (Ehara, 1986 add Darmawati, 2012); ketiga, uji hemaglutinasi. Hasil uji hemaglutinasi terhadap golongan darah ABO menunjukkan bahwa protein pilli *S. typhi* mampu mengaglutinasikan eritrosit manusia golongan darah A sampai pengenceran 256 kali (titer 1/256), B sampai pengenceran 2048 kali (titer 1/2048), AB sampai pengenceran 128 kali (titer 1/128) dan O sampai pengenceran 2 kali (titer 1/2), tetapi tidak mampu mengaglutinasikan eritrosit domba. Hal ini memberikan gambaran umum bahwa protein pilli *S. typhi* memiliki aktivitas untuk mengaglutinasikan sel darah manusia tetapi tidak terhadap eritrosit domba.

Kata kunci : ***Salmonella typhi*, Protein Pilli, Hemaglutinasi, Eritrosit Manusia dan Domba.**

HEMAGGLUTINATION TEST OF PILLI PROTEIN *Salmonella typhi* BA07.4 TOWARDS HUMAN RED BLOOD CELLS AND SHEEP

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ABSTRACT

Pilli in *Salmonella typhi* bacteria composed of protein pillin, serves as an important mediator in the process of adhesion to the surface of the host cell. The protein pilli bond with the host cell surface determines the sensitivity of the host's immunological response to the antigen. The purpose of this study was to determine the hemagglutination activity of protein pilli in *S. typhi* on human blood cells ABO blood type and against sheep red blood cells. The research method was carried out in three stages; first, planting bacteria using biphasic media (BHI agar and BHI liquid); second, protein pilli isolation with the method (Ehara, 1986 add Darmawati, 2012); third, hemagglutination test. The results of hemagglutination test on blood group ABO showed that protein pilli *S. typhi* was able to routine human blood erythrocytes A until dilution was 256 times (titers 1/256), B until dilution was 2048 times (titer 1/2048), AB until dilution was 128 times (titers 1/128) and O until dilution 2 times (titre 1/2), but unable to agglutinate sheep erythrocytes. This gives a general description that protein pilli *S. typhi* has an activity to agglutinate human blood cells but not against sheep erythrocytes.

Keywords: *Salmonella typhi*, Protein Pilli, Hemagglutination, Erythrocytes of Humans and Sheep.