

EHEC Secreted Protein FU (EspFU), a diagnostic tool and therapeutic target for pathogenic enteric bacterium

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Technology description

Enteropathogenic Escherichia coli (EPEC) and enterohemorrhagic

E. coli (EHEC) are closely related human pathogens that generate attaching and effacing (AE) lesions to colonize the intestine, damage the epithelium, and promotediarrheal illnesses.

The present invention is based on the identification of EspFu(EspF -like polypeptide encoded by a gene of the cryptic prophage CP-933U of enterohemorrhagic Escherichia coli) as a secreted protein that promotes actin pedestal formation by enteric organisms.

An effector required for efficient actin pedestal formation in certain enteric organisms, EspFucan be used as an diagnostics marker and a therapeutic targetin various screens and assays. EspFucan also be used to induce pedestal formation in less dangerous model systems of highly pathogenic enteric organisms, e.g., enterohemorrhagic E. coli (EHEC).

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