

DATA SHEET

Product Name: Equine, Latherin

Catalog #: L-1001

Source: Recombinant. A DNA sequence encoding the equine latherin sequence, was expressed in E. coli

Molecular Mass: 22,635 Da theoretical

Protein Purity: >98% by SDS-PAGE

Counter Ion: 20mM Tris-HCl pH 7.4

Supplied As: White lyophilized powder

Resuspension: Resuspend in water at conc. of .1-1 mg/ml. Recommended to briefly centrifuge to ensure full resuspension of product.

Storage: -20°C

Description: Latherin is a 22 kD (208 amino acids) hydrophobic protein found in equines. It functions as a surfactant protein and has an amino acid sequence that shows similarities to PLUNC (palate, lung, and nasal epithelium) proteins¹. This protein has been shown to reduce the surface tension of water at concentrations below 1mg/ml¹ and increase the rate of evaporation. Latherin may assist in breaking up microbial biofilms and help limit the buildup of such biofilms on various surfaces² and may be useful to study alongside other biosurfactants such as Surfactant Proteins A, B, C, and D which can be found in the lungs and other areas of the human body. Latherin belongs to an intriguing group of natural surfactant proteins that are bio-compatible unlike current commercially available detergents³. The latter are disruptive to cell membranes and also denature proteins resulting in their bio-incompatibility, where Latherin does not. Natural surfactant proteins such as Latherin have critical implications in nanotechnology and the amelioration of effects of oil spills after environmental disasters. Further investigation of Latherin in these contexts will result in new and pioneering inventions in biotechnology.

References:

1. McDonald, R.E., et al., (2009) PLoS ONE 4(5) : e5726
2. Kennedy, M.W., (2011) Biochemical Society Transactions, 39 (4) : 1017-1022
3. Cooper, A., et al., (2017) Physicochem Eng Asp, 534 : 120-129

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