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Product Information

Anti-*Proteus mirabilis* antibody produced in rabbit
IgG fraction of antiserum

Product Number **SAB4200818**

Product Description

Anti-*Proteus mirabilis* antibody is developed in rabbits using UV-killed *P. mirabilis* OXK bacteria (ATCC 15146). Whole antiserum is purified using protein A immobilized on agarose to provide the IgG fraction of antiserum.

Anti-*Proteus mirabilis* antibody recognizes *P. mirabilis* whole extract and *P. mirabilis* LPS. The antibody also recognizes an additional ~70 kDa band, suspected to be bacterial HSP70 (DNAK) in whole extracts of *P. vulgaris, P. gingivalis, E.coli K-12, P.aeruginosa, S. flexneri, S. enterica* and *E. faecalis,* but it has no crossreactivity with *P. vulgaris* LPS. The antibody may be used in various immunochemical techniques including immunoblotting and ELISA. Detection of the *P. mirabilis* LPS bands by immunoblotting is specifically inhibited by the immunogen.

Proteus mirabilis is a Gram-negative rod-shaped bacterium belonging to the Enterobacteriaceae family. Members of the *Proteus* genus (*Proteus* spp.), which also includes *Proteus mirabilis*, *Proteus penneri, and Proteus hauseri*, originally characterized by their ability to swarm on solid surfaces, are widespread in the environment and the gastrointestinal tract of humans and animals, and known to be an opportunistic pathogens isolated from urine, wounds, and other clinical sources.

The *Proteus* spp. bacteria are distinguished by their reactions for indole production, salicin fermentation, and aesculin hydrolysis.[1-3] *P. vulgaris* produces indole which differentiates it from the indole-negative *P. mirabilis* and *P. penneri*.[1-3] *Proteus* spp. bacteria may also be found in soil or water habitats where they often regarded as indicators of fecal pollution and a contamination threat for potential water or seafood poisoning.[1]

In the *Proteus* spp. group, *P. mirabilis* is encountered in the community and causes the majority of urinary tract *Proteus* spp. infections whereas *P. vulg*aris and *P. penneri* are less common and mainly associated with nosocomial none urinary infections.[2,4]

P. mirabilis have a number of putative virulence factors including urease, haemolysin, fimbriae structure, and iron uptake which have been suggested to contribute to host cell invasion and cytotoxicity, ability to invade uroepithelial cells, and agglutinate red blood cells.[4] *P. vulgaris*, *P. mirabilis,* and *P. penneri* harbor resistance to β-lactam antibiotics as they are capable of producing inducible β-lactamases that hydrolyze primary and extended-spectrum penicillins and cephalosporins.[5-7]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:10,000-1:20,000 is recommended using *Proteus mirabilis* LPS.

Indirect ELISA: a working dilution of 1:16,000-1:32,000 is recommended using dead *Proteus mirabilis* bacteria for coating.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

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