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Yersinia enterocolitica Antigens

Y. enterocolitica isolates have been identified as the causative agent of yersiniosis, which is considered an important food-borne gastrointestinal (GI) infection in humans. *Y. enterocolitica* infects M-cells in the Peyer's patches. Subsequent contagion of the underlying lamina propria, which is part of the mucosa lining the GI-tract, leads to destruction of the intestinal epithelial cells. Depending on the patient, various symptoms ranging from acute enteritis with diarrhea, fever or nausea have been reported to be associated with acute yersiniosis. Besides its ability to infect intestinal cells, *Y. enterocolitica* is able to spread from the lamina propria to infect other organs and cause sequelae, which may follow acute infection within several weeks.

In1969, Ahvonen *et al.* reported reactive arthritis (ReA), known as Reiter's disease, as such a sequela. ReA describes inflammation in joints and other tissues.

Key virulence factor of pathogenic *Y. enterocolitica* strains is a plasmid-encoded type III secretion system, through which *Yersinia* outer proteins (Yops) and other effectors are injected into the host cell to interfere with its phagocytic activity. YopB, YopD, and LcrV (low calcium response V antigen) serve as adapter proteins and are involved in the pore-formation. Yop E, a GTPase activation protein, is one of the translocation regulators and is also implicated in controlling pore formation.

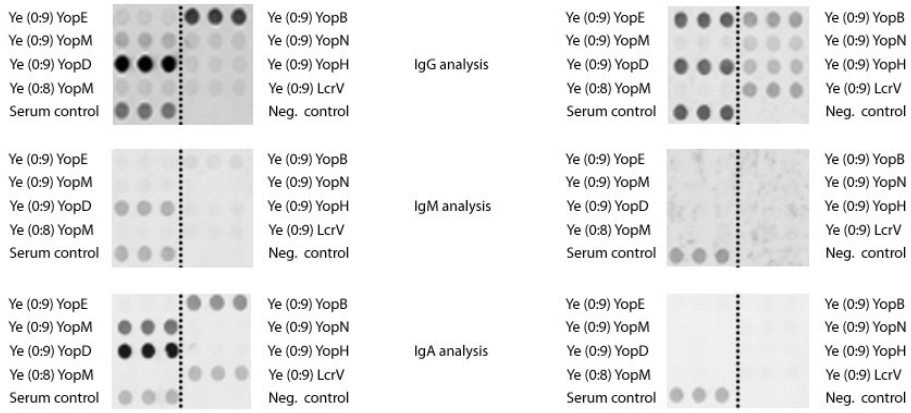

Figure: Immunodot analyses of sera from two patients infected with Yersinia enterocolitica. The presence of IgG (top panel), IgM (middle panel), and IgA (lower panel) antibodies were determined using antigens from Y. enterocolitica serogroups O:8 and O:9.

Ordering Information		
43000	*Yersinia enterocolitica* (O:8) YopM	0.1 mg
43001		1.0 mg
43100	*Yersinia enterocolitica* (O:9) LcrV	0.1 mg
43101		1.0 mg
43200	*Yersinia enterocolitica* (O:9) YopB	0.1 mg
43201		1.0 mg
43300	*Yersinia enterocolitica* (O:9) YopD	0.1 mg
43301		1.0 mg
43700	*Yersinia enterocolitica* (O:9) YopE	0.1 mg
43701		1.0 mg
43400	*Yersinia enterocolitica* (O:9) YopH	0.1 mg
43401		1.0 mg
43500	*Yersinia enterocolitica* (O:9) YopM	0.1 mg
43501		1.0 mg
43600	*Yersinia enterocolitica* (O:9) YopN	0.1 mg
43601		1.0 mg

YopN has been identified as regulator for timely injection of effector proteins. YopM and YopH are two of the effectors, whose injection is regulated by YopN. While YopM has been identified to activate ribosomal S6 kinase, YopH acts as a tyrosine phosphatase that interferes with the host's cellular signaling cascades.

Y. enterocolitica antigens are produced in either *E. coli* or the baculovirus/insect cell expression system.

References:
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Leirisalo-Repo (2005) Scand J Rheumatol. 34 (4): 251-259
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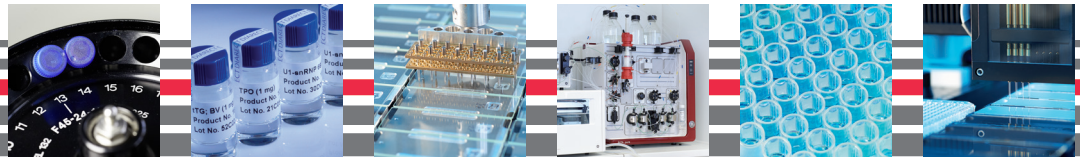

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