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A panel of monoclonal antibodies against human sperm

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To help identify and characterize antigens involved in sperm functions and immune infertility, monoclonal antibodies (mAbs) were raised against human sperm antigens. The immunoglobulin G (IgG) fraction of serum from a male donor with a spontaneous high titer of IgG-positive antisperm reactivity (as determined by immunobead binding) was purified by ammonium sulfate precipitation. This IgG preparation was coupled to Sepharose 4B and was used for immunoaffinity purification of antigens from a detergent-solubilized extract of pooled normal human sperm. The affinity-purified antigens were used to immunize female mice, and the resultant spleen cells were fused with SP 2/0 mouse myeloma cells to generate hybridomas. A single-step semi solid methylcellulose method was used to isolate hybridomas for the selection of positive clones, which were determined by enzyme-linked immunosorbent assay. Thirty-two positive hybridoma lines were selected for immunolocalization and cross-reactivity studies using an avidin-biotin complex assay. Distinctive staining patterns and distribution of sperm antigens were observed for 10 mAbs. Among them, the cross-reactivity with human lymphocytes was not observed for four mAbs.

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