

What is a hybridoma and what does it produce?

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- A hybridoma is a hybrid cell obtained by fusing an antibody-producing B cell with a myeloma cell (B cancer cell). Antibodies produced by the hybridoma are all of a single specificity and are therefore monoclonal.

Define: monoclonal
antibody/polyclonal antibody

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- **Monoclonal antibodies** are **monospecific antibodies** (single antibody species) that are made by identical immune cells that are all clones of a unique parent B cell. They bind one specific site (epitope) of the target molecule.
- **Polyclonal antibodies** (mixed population of antibodies) which are made from several different immune cells (B cells). Polyclonal antibodies bind to different sites (epitopes) of the target molecule.

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- Mouse monoclonal antibodies are structurally similar to human antibodies but differences in the constant region of the antibody between the two species were sufficient to evoke an immune response when these antibodies were injected into humans, resulting in their rapid removal from the blood.

What's the name of an antibody which comprises the variable (antigen binding) regions of a mouse antibody and the constant region of a human antibody?

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- Chimeric antibody