

Monoclonal antibodies

Triple only

Higher tier

What are monoclonal antibodies?

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Which cells are stimulated to make the antibody?

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What is a hybridoma cell?

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How is a large amount of one monoclonal antibody obtained?

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Give three uses of monoclonal antibodies.

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How can monoclonal antibodies treat cancer?

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What are the disadvantages of monoclonal antibodies?

Mouse lymphocytes.	Antibodies produced from a single clone of cells, specific to one binding site on one protein antigen.
Single hybridoma cells are cloned, then the antibody is collected and purified.	A lymphocyte combined with a tumour cell. It can both divide and make the antibody.
They carry a radioactive substance, toxic drug or growth-stopping chemical to cancer cells without harming other cells.	Diagnosis (pregnancy tests), lab measurement or detection, research with fluorescent dye, treating disease.
	More side effects than expected, and not yet as widely used as hoped.