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Fluorescent dextrans

An alternative to classical fluorescent labelling methods for **flow cytometry**.

30 min
CONJUGATION

Compatible with any biotinylated molecule

NEW PATHWAY

1. Efficient antigen recognition
2. Optimised antigen presentation
3. Signal amplification
4. Low non-specific labelling
5. Detection of minority populations
6. Fast and efficient conjugation

Do you want more information?
Scan this QR code and see all the details of our fluorescent dextrans.

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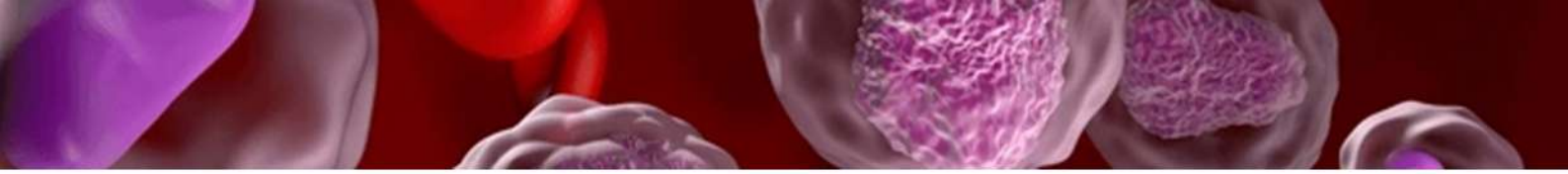
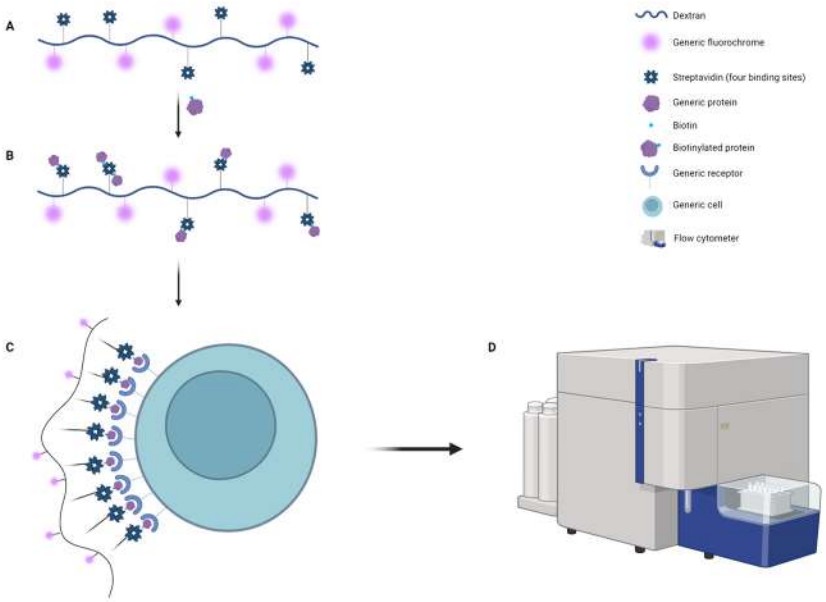


DEXTRAN SIGNALLING SYSTEM

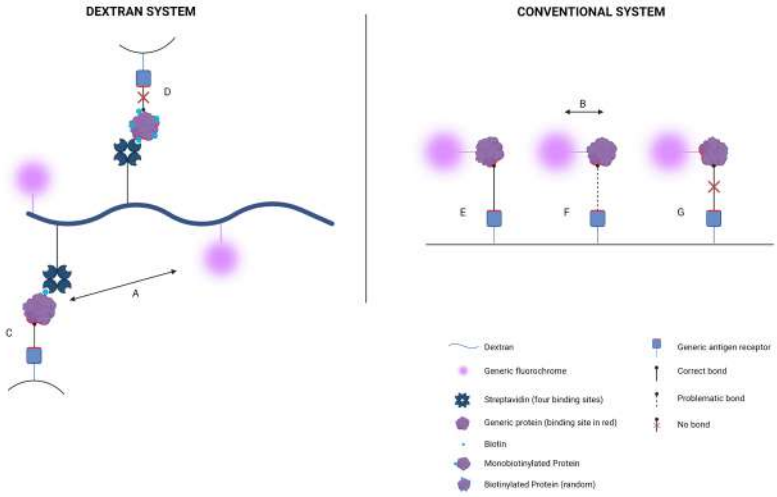
Dextrans, polysaccharides of bacterial origin, can be functionalised with fluorochromes and streptavidin for use as versatile carriers in biomedical applications.

This dextran-fluorochrome-streptavidin complex (Fig. 1A) allows any biotinylated molecule to be bound via the biotin-streptavidin system (Fig. 1B).

This incorporated molecule, antigen, can be used to bind the whole complex to a target cell, or other established system, (Fig. 1C) and be detected by flow cytometry by means of the fluorochrome (Fig. 1D).



ANTIGEN-RECEPTOR BINDING



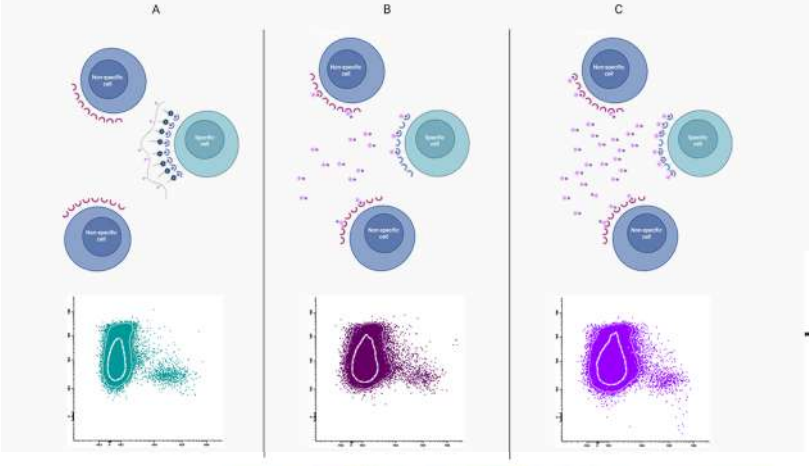
A-B) We note the difference in spacing between the fluorochrome and the protein; the spacing in the dextran **(A)** is larger than in a conventional conjugation (B), which favours binding, as can be seen in the comparison of bindings C and F. The binding site in F is partially impeded by the spacing of the fluorochrome.

C-D) We compare the binding of a monobiotinylated protein **(C)** to a random normal biotinylated one **(D).** It is observed that random conjugation compromises the recognition of the protein, as the binding site may be conjugated to biotin and bind to streptavidin or the protein may become spatially unrecognisable. Monobiotinylation is targeted and the binding site is secured.

E-F-G) In a conventional conjugation, three situations can occur with respect to binding: correct binding **(E)**, problematic binding **(F)** and no binding **(G).** This occurs because the conjugation is random and the binding site can be more or less accessible; this does not occur in dextran **(as seen in C).**

CELL LABELLING

We compared the fluorescent dextran cell labelling system (A) with the conventional system (B and C).



A) Not much dextran is needed; binding is efficient and separation is optimal.

B) With little reagent, there is non-specific binding and insufficient separation.

C) Increasing the reagent improves separation but increases non-specific binding.

	REF	Σ	
PE	DXPESTV-25T	25 test	RUO
PE	DXPESTV-100T	100 test	