

Anti-Mannan [LM21]

Catalogue number: 157889

Sub-type:

Images:

Contributor

Inventor: Paul Knox

Institute: University of Leeds

Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: Anti-Mannan [LM21]

Alternate name: α -(1-4) Mannan

Class: Monoclonal

Conjugate: Unconjugated

Description: How the diverse polysaccharides present in plant cell walls are assembled and interlinked into functional composites is not known in detail. It has been shown that molecular recognition of mannan polysaccharides present in intact cell walls is severely restricted. In secondary cell walls, mannan esterification can prevent probe recognition of epitopes/ligands, and detection of mannans in primary cell walls can be effectively blocked by the presence of pectic homogalacturonan. Masking by pectic homogalacturonan is shown to be a widespread phenomenon in parenchyma systems, and masked mannan was found to be a feature of cell wall regions at pit fields. Direct fluorescence imaging using a mannan-specific carbohydrate-binding module and sequential enzyme treatments with an endo-mannanase has confirmed the presence of cryptic epitopes and that the masking of primary cell wall mannan by pectin is a potential mechanism for controlling cell wall micro-environments.

Purpose:

Parental cell:

Organism:

Tissue:

Model:

Gender:

Isotype:

Reactivity:

Selectivity:

Host:

Rat

Immunogen: Neoglycoprotein immunogen, prepared by coupling of mannopentaose (Man5) and digalactosylmannopentaose (Gal2Man5) oligosaccharides to bovine serum albumin (BSA) by reductive amination.

Immunogen UNIPROT ID:

Sequence:

Growth properties:

Production details:

Formulation:

Recommended controls: IgM

Bacterial resistance:

Selectable markers:

Additional notes:

Target details

Target: α -(1 $\rightarrow$ 6)-manno-oligosaccharides from DP2 to DP5.

Target alternate names:

Target background: How the diverse polysaccharides present in plant cell walls are assembled and interlinked into functional composites is not known in detail. It has been shown that molecular recognition of mannan polysaccharides present in intact cell walls is severely restricted. In secondary cell walls, mannan esterification can prevent probe recognition of epitopes/ligands, and detection of mannans in primary cell walls can be effectively blocked by the presence of pectic homogalacturonan. Masking by pectic homogalacturonan is shown to be a widespread phenomenon in parenchyma systems, and masked mannan was found to be a feature of cell wall regions at pit fields. Direct fluorescence imaging using a mannan-specific carbohydrate-binding module and sequential enzyme treatments with an endo-mannanase has confirmed the presence of cryptic epitopes and that the masking of primary cell wall mannan by pectin is a potential mechanism for controlling cell wall microenvironments.

Molecular weight:

Ic50:

Applications

Application:

Application notes:

Handling

Format: Liquid

Concentration:

Passage number:
Growth medium:
Temperature:
Atmosphere:
Volume:
Storage medium:
Storage buffer:
Storage conditions:
Shipping conditions: Shipping at 4° C

Related tools

Related tools:

References

References: Pedersen et al. 2012. J Biol Chem. 287(47):39429-38. PMID: 22988248.

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