

WGP Dispersible

1,3/1,6- β -glucan from *S. cerevisiae*; Dectin-1 ligand

Catalog # t1rl-wgp

For research use only

Version # 14L12-MM

PRODUCT INFORMATION

Content:

50 mg WGP Dispersible

Storage and stability:

- WGP Dispersible is shipped at room temperature. Store at room temperature. Powder is stable 1 year when properly stored.
- Upon resuspension, WGP Dispersible is stable at least 1 month at 4°C.

DESCRIPTION

Whole glucan particles (WGP) are beta-glucans notable for their ability to modulate the immune response. WGP Dispersible (WGP[®] Dispersible from Biothera) is a particulate *Saccharomyces cerevisiae* β -glucan preparation. It consists of hollow yeast cell wall "ghosts" composed primarily of long polymers of β -1,3 glucose obtained after a series of alkaline and acid extractions from *S. cerevisiae* cell wall¹. In contrast to other dectin-1 ligands such as Zymosan, WGP Dispersible lacks TLR-stimulating activity². Similarly to Zymosan, WGP Dispersible induces Dectin-1-dependent responses, including phagocytosis and induction of TNF- α , IL-6 and ROS (reactive oxygen species) by macrophages and dendritic cells.

InvivoGen also provides a control, WGP Soluble (WGP[®] Soluble), that binds Dectin-1 without activating this receptor. Furthermore, WGP Soluble significantly blocks the binding of WGP Dispersible to macrophages and its immunostimulatory effect¹.

WGP[®] Dispersible and WGP[®] Soluble are registered trademarks of Biothera.

1. Li B. et al., 2007. Yeast glucan particles activate murine resident macrophages to secrete proinflammatory cytokines via MyD88- and Syk kinase-dependent pathways. *Clin Immunol.* 124:170-81. **2. Goodridge HS. et al., 2011.** Activation of the innate immune receptor Dectin-1 upon formation of a 'phagocytic synapse'. *Nature.* 472:471-5. **3. Schindler U. & Baichwal VR., 1994.** Three NF- κ B binding sites in the human E-selectin gene required for maximal tumor necrosis factor alpha-induced expression. *Mol Cell Biol.* 14:5820-5831.

CHEMICAL PROPERTIES

Synonym: 1,3/1,6- β -Glucan

Appearance: Beige to light brown powder

METHODS

Preparation of WGP Dispersible suspension (1 mg/ml)

Stimulation of Dectin-1 can be achieved with 1 - 200 μ g/ml of WGP Dispersible.

- Weigh 10 mg of WGP Dispersible.
- Add 10 ml of endotoxin-free water and vortex to homogenize.
- Serial dilutions can be prepared using the appropriate amount of water.

WGP Dispersible induced NF- κ B activation

WGP Dispersible can be used to activate Dectin-1 in cells expressing Dectin-1, including murine macrophages RAW-Blue[™] cells. These cells express Dectin-1 and an NF- κ B-inducible secreted embryonic alkaline phosphatase (SEAP) gene.

For more information visit: www.invivogen.com/raw-blue

- Stimulate RAW-Blue[™] cells (5×10^5 cells/ml) with 10 - 200 μ g/ml WGP Dispersible.
- Incubate cells and WGP Dispersible for 6 - 24 h at 37°C, 5% CO₂.
- Determine dectin-1 activation by assessing SEAP expression using a SEAP detection medium, such as QUANTI-Blue[™].

RELATED PRODUCTS

Product	Catalog Code
QUANTI-Blue [™]	rep-qb1
RAW-Blue [™] Cells	raw-sp
WGP Soluble	t1rl-wgps
Other Dectin-1 ligands:	
Curdlan	t1rl-cura
HKCA (heat killed <i>C.albicans</i>)	t1rl-hkca
HKSC (heat killed <i>S.cerevisiae</i>)	t1rl-hksc
Zymosan (cell wall preparation from <i>S.cerevisiae</i>)	t1rl-zyn
Zymosan depleted (hot alkali treated zymosan)	t1rl-dzn

TECHNICAL SUPPORT

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