



DC-SIGN & Langerin LEctPROFILE® kit

Reference : LK02DCL

Technical Note

DC-SIGN & Langerin LEctPROFILE® kit (Reference: LK02DCL)

Description

DC-SIGN is a pathogen recognition receptor, C-type lectin expressed at the surface of monocytes and in subsets of immature and mature Dendritic Cells (Dcs) with essential role in immune regulation. Moreover, DC-SIGN is hijacked by numerous bacteria, virus and fungi pathogens (such as HIV, Ebola virus, *C.albicans*) during their infection process, and much attention has been focused on the development of DC-SIGN antagonists.

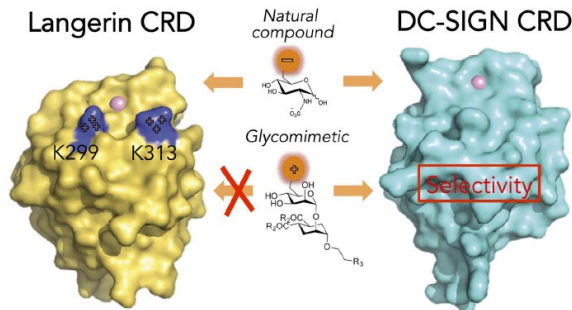
Langerin is a C-type lectin found on human Langerhans cells which are dendritic cells involved in innate immunity and pathogen elimination. Indeed, Langerin is implicated in endocytosis and the formation of Birbeck granules specific cytoplasmic organelles during the antigen processing.

Applications

➔ Research of DC-SIGN Langerin differential ligands

Porkolab, V. et al.¹

The research of specific ligands that bind only on DC-SIGN and not on Langerin have a great interest for the regulation of immune response and/or blocking pathogen invasions. In this publication, the authors show the synthesis of glycomimetics which present specific recognition only with DC-SIGN.



The DC-SIGN & Langerin LEctPROFILE® kit can be used to:

- (1) Highlight differential ligands interaction profil with this both C-type lectins such as glycomimetics ligands presented in *Porkolab et al.*¹
- (2) Easy research, evaluation and comparison of new ligands through the determination of their IC_{50}^2

References

1. V. Porkolab, E.Chabrol, N.Varga, S.Ordanini, I.Sutkevičiūtė, M.Thépaut, M. J. García-Jiménez, E. Girard, P. M. Nieto, A.Bernardi, F.Fieschi, *Rational-Differential Design of Highly Specific Glycomimetic Ligands: Targeting DC-SIGN and Excluding Langerin Recognition*. *ACS Chem. Biol.* **2018**, *13*, 600–608.
2. Selection of novel C-type lectin ligands through new screening method [Blanka Didak](#), Antonio Di Maio, Laura Medve, Silvia Achilli, Franck Fieschi, Anna Bernardi, Javier Rojo, Ludovic Landemarre. International Carbohydrate Symposium, **2018**, Lisboa, Portugal.