

Introducing Olink[®] Flex: Interferon Stimulation Panel

Predicting tumor resistance to immunotherapy through IFN-stimulated serum protein biomarkers

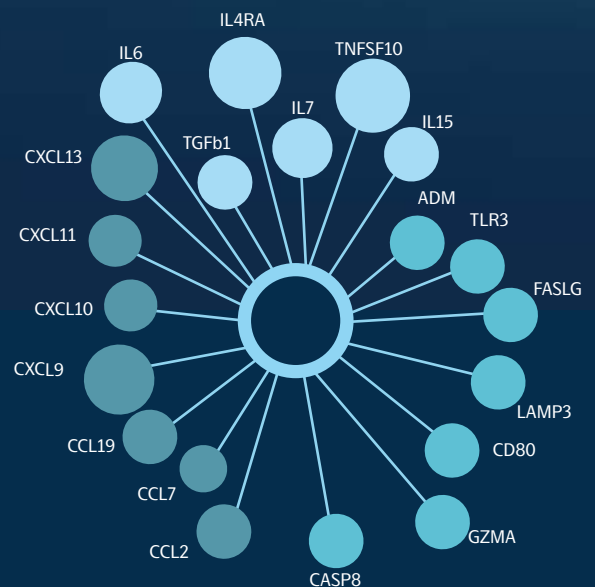
While immunotherapeutic approaches have achieved durable treatment responses in certain cancer patients and raise hope for further advancements, a lack of response and acquired drug resistance continue to pose major clinical challenges. Understanding the intricate mechanisms of tumor immune evasion is key to identifying novel druggable targets, as well as biomarkers that could lead to improved response prediction and patient stratification.

Interferons are widely recognized as important drivers of the anti-tumoral immune response, with elevated serum levels of IFN γ and interferon-stimulated proteins reported in cancer patients responding to immunotherapy.

IFN-mediated immune modulation can also contribute to resistance mechanisms across different cancer types. For instance, high serum levels of proteins encoded by interferon stimulated genes (ISGs) have been associated with resistance to immune checkpoint blockers in patients with renal cell carcinoma and melanoma

These findings suggest that blood profiling based on an IFN signature can be relevant for predicting and following patient response to immunotherapy.

The Olink[®] Flex IFN stimulation panel consists of 20 protein biomarkers, including CCL2, IL15 and L6, which have been shown as relevant for predicting response to immunotherapy. These biomarkers may be important both for understanding the context-dependent role of IFN stimulation in treatment response, as well as for developing personalized therapeutic strategies.



Key publications:

- Dubrot et al. In vivo CRISPR screens reveal the landscape of immune evasion pathways across cancer. *Nature Immunology* (2022)
- Rozeman et al. Survival and biomarker analyses from the OpACIN-neo and OpACIN neoadjuvant immunotherapy trials in stage III melanoma. *Nature Med* (2021)
- Vaes et al. Identification of Potential Prognostic and Predictive Immunological Biomarkers in Patients with Stage I and Stage III Non-Small Cell Lung Cancer (NSCLC): A Prospective Exploratory Study. *Cancers* (2021)
- Christensen et al. Protein Signatures and Individual Circulating Proteins, including IL-6 and IL-15, Associated with Prognosis in Patients with Biliary Tract Cancer. *Cancers* (2023)

Need more flexibility?

Olink[®] Flex allows you to optimize this panel with other validated assays from the Flex library or to build an entirely new panel that fits your research interests. Try the Flex panel builder on [Olink[®] Insight](#) now!

