

At Sannova, we understand that navigating the complexities of protein analysis and therapeutic development requires adaptability and innovation.

Let us share a recent collaboration where a sponsor's gene therapeutic induces the **generation of a protein with close homology with an endogenous protein.**



## ✦ Challenge

Sponsor's prior CRO used a **bottom-up approach** -a process which is digesting the protein with trypsin and using that peptide to quantify the larger one, but their **choice of peptide did not address the homology** since the peptide sequence is present in a very challenging preclinical animal and human tissues.

Understanding the **importance of precision in protein analysis**, Sannova engaged in thorough discussions with the client to identify the most effective strategy.

## ✦ Solution

01

Screening the whole protein sequence of a **>80KD protein** by High-Resolution Mass Spectrometry (HRMS)

02

Utilized comprehensive protein databases to **capture a complex peptide sequence unique to human tissue** and absent in the model organism's tissue.

03

Crafted a long-term plan centered around **middle down digestion, with a case specific digestion approach**, to encompass various mutations across the protein sequence.



As a result, our sponsor is now ready to dose their preclinical studies with a robust method in hand and no delays for sample analysis.