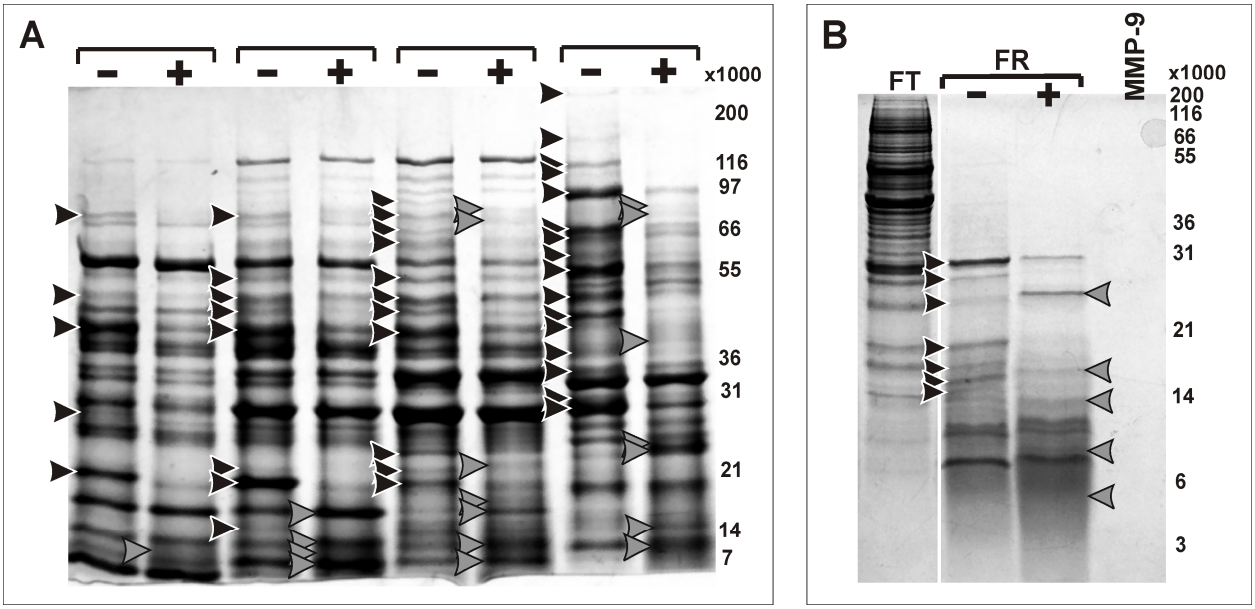

Representative gels generated by 2D-degradomics and fragment degradomics. **A.** After incubation in the absence (-) or presence (+) of MMP-9 (100 nM) for 24h, the ion exchange (IEC) fractions were separated by molecular mass upon SDS-PAGE analysis. Protein bands that were present in the uncleaved fractions (-) but disappeared or decreased in the cleaved fractions (+) were considered to be candidate MMP-9 substrates and indicated by black arrowheads. Protein bands that appeared or increased in intensity in the digested fractions (+) were potential substrate fragments (depicted by grey arrowheads). Apparent molecular masses are shown on the right in Da. **B.** The pooled CEC flow through fractions (FT) were neutralized and incubated with (+) or without (-) activated MMP-9 (100 nM) for 24 h. Fragment fractions (FR) were enriched by fragment degradomics and analyzed by SDS-PAGE. Protein bands that were present in the uncleaved fragment fraction (FR, -) but disappeared or decreased in the cleaved fragment fraction (FR, +) were considered to be candidate MMP-9 substrates (black arrowheads). Protein bands that appeared or increased in intensity in the digested fragment fraction (FR, +) were potential substrate fragments (grey arrowheads). As a control for non-specific MMP-9 fragments, activated MMP-9 (100 nM) was also subjected to fragment degradomics and analyzed on the same gel (lane 4). Apparent molecular masses are shown on the left in Da.