

# Trypsin-digested BSA MS Standard (CAM-modified)



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P8108S 002130215021

## P8108S

**500 pmol**    **Lot: 0021302**    **Exp: 2/15**  
**freeze dried**    **Store at -20°C**

**Description:** A complex mixture of peptides produced by Trypsin digestion of Bovine Serum Albumin (BSA) that was reduced and alkylated with Iodoacetimide (CAM modified). This peptide mixture can be used to test a Matrix-Assisted Laser Desorption/Ionization Time-Of-Flight (MALDI-TOF) or Electrospray Ionization (ESI) mass spectrometer (TOF, Q-TOF or Ion Trap).

**Source:** BSA (GENBANK P02769) was digested using Modified Trypsin (TPCK-treated).

**Useful Range:** 500 to 3000 Daltons.

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**Quality Assurance:** Peptides are free of salts, glycerol and detergents.

**Storage Conditions:** Supplied in lyophilized form. Store at -20°C.

### Quality Controls

**NanoLC-ESI MS/MS:** One hundred fmol of the peptide mixture was subjected to nano-reverse-phase liquid chromatography on an Agilent NanoLC C18/Chip 6330 Ion Trap and developed with a water to acetonitrile gradient with both solvents containing 0.1% formic acid. The MS/MS data were analyzed with Mascot, 250 spectra were selected for analysis and a score of 800 or greater was obtained.

**MALDI-TOF MS:** 0.1 to 1 µl of each of the peptide mixture (0.5 to 5 pmol) was mixed with 1 µl of α-cyano-4-hydroxycinnamic acid matrix solution, air-dried and subjected to MALDI-TOF MS analysis on a Waters Micro MX MALDI-TOF MS. The spectra obtained contains more than 15 resolved peaks which match the theoretical peaks.

**Notes:** Suggested volume to resuspend: 500 µl. Avoid repeated freeze/thaw cycles once in solution.

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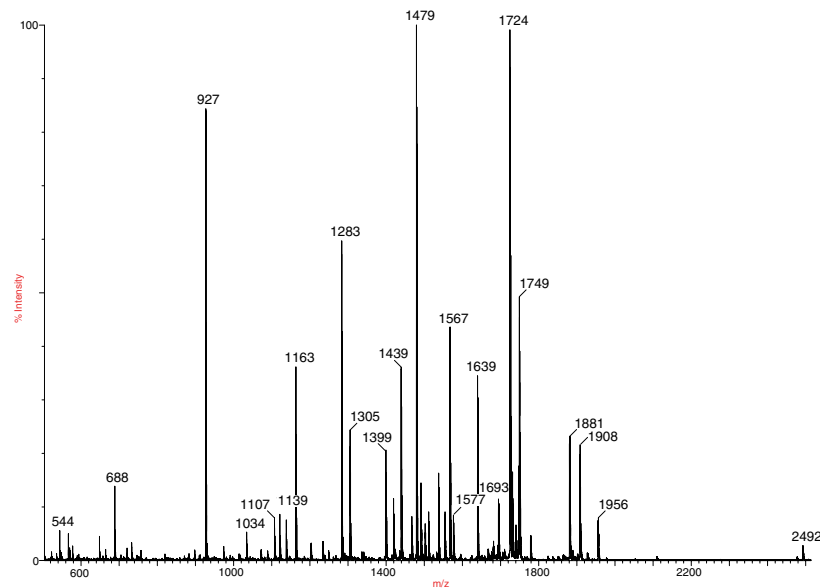
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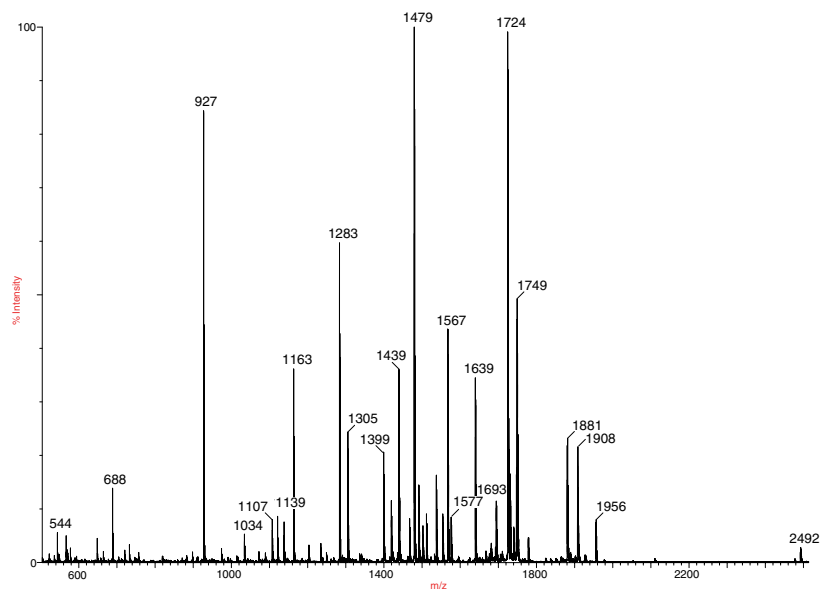
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**MALDI Analysis of BSA Digest:** The BSA digest solution was diluted to 1 pmol/µl and mixed at a 1:1 ratio with α-cyano-4-hydroxycinnamic acid (10 mg/ml in 50:50 acetonitrile:water with 0.1% trifluoroacetic acid). Two µl of the digest/matrix solution were then spotted directly onto a MALDI target plate. The sample was then analyzed on a MALDI micro MX Mass Spectrometer (Waters Corporation) with a laser energy of 150.

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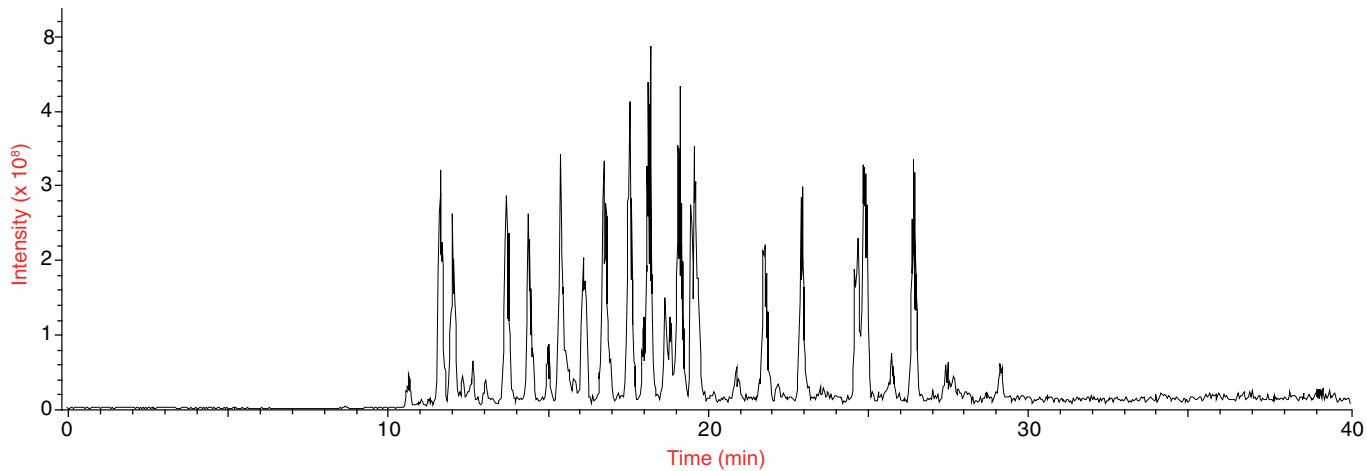
CERTIFICATE OF ANALYSIS



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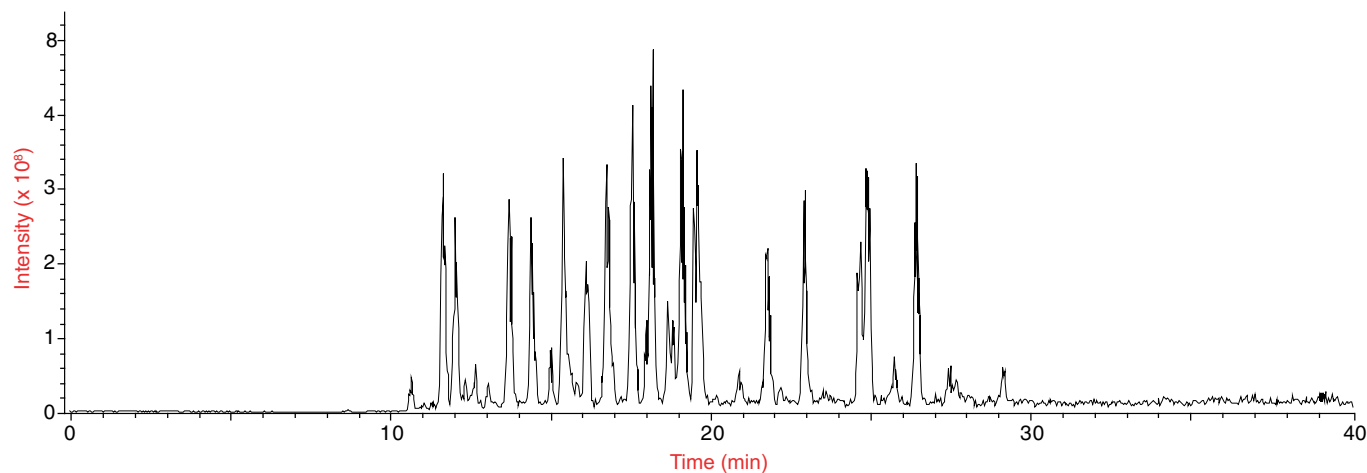
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**Online Analysis of BSA Digest:** The BSA digest solution was diluted to 100 fmol/ $\mu$ l with 0.1% formic acid. One  $\mu$ l of the digest solution was then injected into an HPLC-Chip Cube system and separated on a Protein ID chip packed with Zorbax 300SB-C18 5  $\mu$ m material (Agilent Technologies). Peptides were separated using a 40 min 5-45% B linear gradient (A = 0.1% formic acid, B =  $\text{CH}_3\text{CN}$ , 0.1% formic acid) at a flow rate of 0.5  $\mu$ l/min and analyzed online by a 6330 Ion Trap Mass Spectrometer with a nano-electrospray ionization source (Agilent Technologies). The acquisition range was from 300 to 1800 m/z and a capillary voltage of 1800 V was used.

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