

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



1-800-632-7799  
info@neb.com  
www.neb.com



P8108S 012160918091

**P8108S**

**500 pmol**      **Lot: 0121609**    **Exp: 9/18**  
**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 Trypsin (TPCK-treated).

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

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

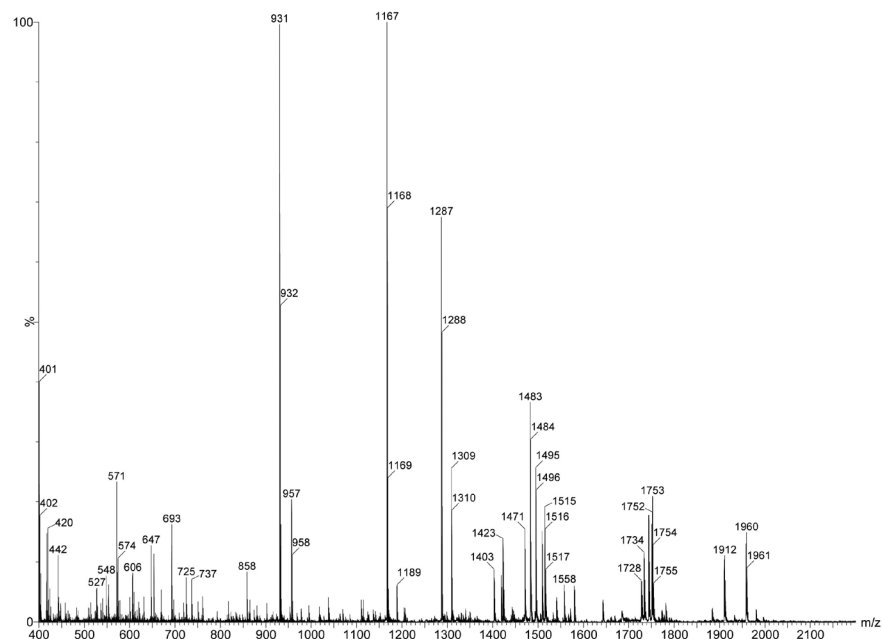
**Storage Conditions:** Supplied in lyophilized form. Store at -20°C.

**Quality Controls**

**Online Analysis:** One hundred fmol of the digest solution is injected via a split-less Agilent NanoLC onto a reverse phase C18 column and analyzed online by an Orbitrap Mass Spectrometer (Thermo Scientific) with an electrospray ion source. Peptides are separated by a water to acetonitrile gradient, both solvents containing 0.1% formic acid. MS/MS spectra were acquired using an acquisition range of 400 to 1600 m/z. Greater than 60% sequence coverage is observed.

**MALDI-TOF MS:** The BSA digest is dissolved to 1 pmol/μl. One μl of digest is 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.



**MALDI Analysis of BSA Digest:** The BSA digest is dissolved to 1 pmol/μl. One μl of digest is mixed with 1 μl of α-cyano-4-hydroxycinnamic acid (10 mg/ml in 50:50 acetonitrile:water with 0.1% trifluoroacetic acid). One μl of the digest/matrix solution were then spotted directly onto a MALDI target plate.

(see other side)

CERTIFICATE OF ANALYSIS

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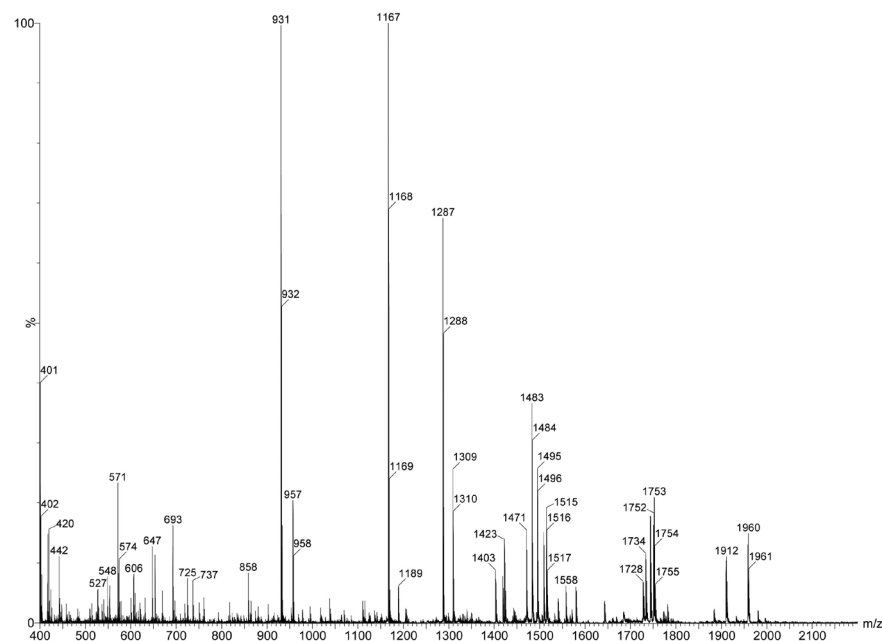
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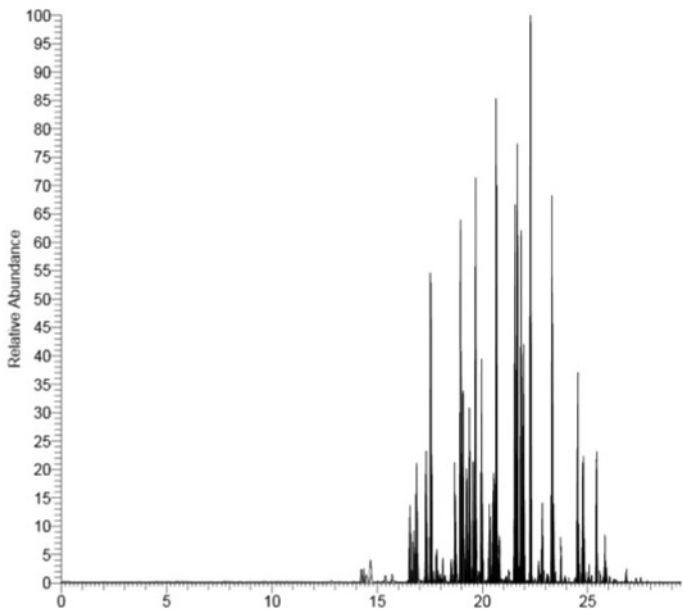
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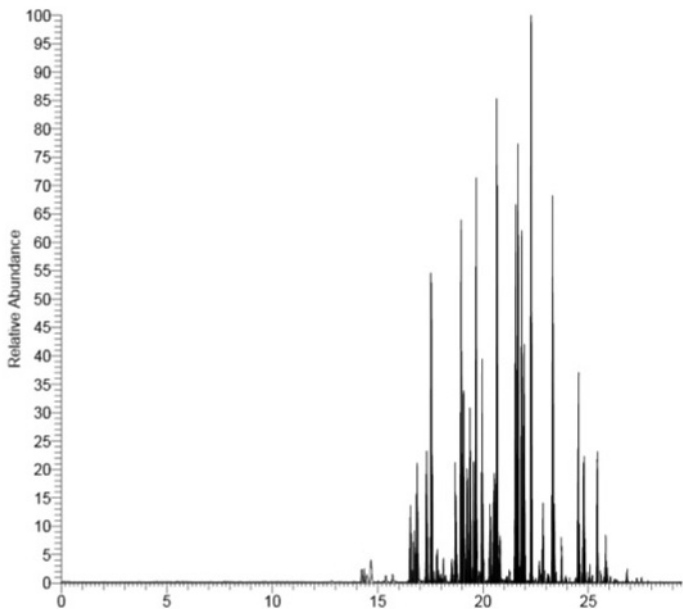
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(see other side)

CERTIFICATE OF ANALYSIS



**Online Analysis of BSA Digest:** The BSA digest solution was diluted to 100 fmol/ $\mu$ l with 0.1% formic acid. One  $\mu$ l (100 fmol) of the digest solution was injected via an Easy-nanoLC II (Proxeon) onto a self-packed reverse phase C18 nano column (Phenomenex packing material, 5 cm, 150  $\mu$ m) and loaded onto a self-packed C18 analytical column with an integrated tip (New Objective Picofrit, 15 cm, 100  $\mu$ m, Phenomenex packing material). Peptides were separated using a 45 min 5-70%B gradient (A = 0.1% formic acid, B = CH<sub>3</sub>CN, 0.1% formic acid) at a flow rate of 400 nl/min. Eluting peptides were analyzed online by a Q-Exactive mass spectrometer (Thermo Scientific) with an electrospray ion source. MS/MS spectra were acquired by HCD using an acquisition range of 400 to 1600 m/z.



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