

Peptide Array, *Mycobacterium tuberculosis* CFP-10 Protein

Catalog No. NR-50712

This reagent is the tangible property of the U.S. Government.

Product Description: The 22-peptide array spans the 10-kDa culture filtrate protein (CFP-10; ESAT-6-like esxB) of the bacterium *Mycobacterium tuberculosis* (UniProt: P0A566). Peptides are 15- or 16-mers, with 11 amino acid overlaps.

Lot: P50712-1 to P50712-22

The following information applies to all peptides:

- Appearance White lyophilized powder
- Mass spectral analysis Correct MW by MALDI or Electrospray
- Counter Ion Trifluoroacetate

Peptide-specific information is shown in the tables below.

Table 1						
Peptide	Date of Mfg.	Length	Sequence	Molecular Weight (amu)	Purity by HPLC ^a	Peptide Content ^b
1 of 22	4/7/2017	15	1-MAEMKTDAATLAQEA-15	1581	80%	87.1%
2 of 22	4/7/2017	15	5-KTDAATLAQEAGNFE-19	1566	80%	63.8%
3 of 22	4/11/2017	15	9-ATLAQEAGNFERISG-23	1564	96%	90.1%
4 of 22	4/11/2017	15	13-QEAGNFERISGDLKT-27	1665	80%	62.4%
5 of 22	4/11/2017	15	17-NFERISGDLKTQIDQ-31	1764	80%	66.5%
6 of 22	4/7/2017	15	21-ISGDLKTQIDQVEST-35	1634	80%	91.6%
7 of 22	4/11/2017	15	25-LKTQIDQVESTAGSL-39	1590	97.6%	73.9%
8 of 22	4/19/2017	15	29-IDQVESTAGSLQGQW-43	1619	80%	87.5%
9 of 22	4/11/2017	15	33-ESTAGSLQGQWRGAA-47	1519	80%	60.0%
10 of 22	4/7/2017	15	37-GSLQGQWRGAAGTAA-51	1431	80%	73.1%
11 of 22	4/7/2017	15	41-GQWRGAAGTAAQAAV-55	1415	95.5%	58.2%
12 of 22	4/7/2017	15	45-GAAGTAAQAAVRFQ-59	1418	80%	63.5%
13 of 22	4/11/2017	15	49-TAAQAAVRFQEAAN-63	1547	80%	62.4%
14 of 22	4/7/2017	15	53-AAVRFQEAANKQKQ-67	1688	80%	67.8%
15 of 22	4/7/2017	15	57-RFQEAANKQKQELDE-71	1834	80%	71.6%
16 of 22	4/11/2017	15	61-AANKQKQELDEISTN-75	1689	80%	63.0%
17 of 22	4/11/2017	15	65-QKQELDEISTNIRQA-79	1773	84.1%	84.5%
18 of 22	4/7/2017	15	69-LDEISTNIRQAGVQY-83	1707	86.9%	80.4%
19 of 22	4/7/2017	15	73-STNIRQAGVQYSRAD-87	1666	80%	70.2%
20 of 22	4/7/2017	15	77-RQAGVQYSRADEEQQ-91	1765	80%	67.8%
21 of 22	4/11/2017	15	81-VQYSRADEEQQALS-95	1752	80%	84.3%
22 of 22	4/11/2017	16	85-RADEEQQALSSQMGF-100	1825	80%	84.9%

^a% full-length
^bRemainder is salt and water

Certificate of Analysis for NR-50712

Table 2 - Amino Acid Analysis

Peptide		Ala (A)	Arg (R)	Asx (N,D)	Cys (C)	Glx (Q,E)	Gly (G)	His (H)	Ile (I)	Leu (L)	Lys (K)	Met (M)	Phe (F)	Pro (P)	Ser (S)	Thr (T)	Trp (W)	Tyr (Y)	Val (V)
1 of 22	Expected	5.00		1.00		3.00				1.00	1.00	2.00				2.00			
	Actual	4.86		1.02		2.95				1.05	0.99	0.00 ^a				1.95			
2 of 22	Expected	4.00		2.00		3.00	1.00			1.00	1.00		1.00			2.00			
	Actual	3.92		2.01		3.09	1.04			1.03	0.97		1.00			1.89			
3 of 22	Expected	3.00	1.00	1.00		3.00	2.00		1.00	1.00			1.00		1.00	1.00			
	Actual	2.96	1.09	1.05		3.08	2.06		0.98	1.03			1.03		0.95	0.97			
4 of 22	Expected	1.00	1.00	2.00		3.00	2.00		1.00	1.00	1.00		1.00		1.00	1.00			
	Actual	0.99	1.13	1.93		2.88	2.11		1.01	1.05	1.00		1.05		0.96	0.97			
5 of 22	Expected		1.00	3.00		3.00	1.00		2.00	1.00	1.00		1.00		1.00	1.00			
	Actual		1.14	3.02		2.88	1.07		2.00	1.06	0.99		1.02		0.96	0.94			
6 of 22	Expected			2.00		3.00	1.00		2.00	1.00	1.00				2.00	2.00			1.00
	Actual			1.99		3.02	1.05		2.04	1.02	1.01				1.89	1.95			1.02
7 of 22	Expected	1.00		1.00		3.00	1.00		1.00	2.00	1.00				2.00	2.00			1.00
	Actual	1.01		1.01		3.04	1.04		1.01	2.04	1.03				1.88	1.93			1.01
8 of 22	Expected	1.00		1.00		4.00	2.00		1.00	1.00					2.00	1.00	1.00		1.00
	Actual	1.03		0.91		4.08	2.17		0.96	1.09					1.92	0.98	0.00 ^a		1.01
9 of 22	Expected	3.00	1.00			3.00	3.00			1.00					2.00	1.00	1.00		
	Actual	2.91	1.11			3.10	3.17			1.04					1.88	0.99	0.00 ^a		
10 of 22	Expected	4.00	1.00			2.00	4.00			1.00					1.00	1.00	1.00		
	Actual	3.84	1.15			2.08	4.15			1.06					0.98	0.93	0.00 ^a		
11 of 22	Expected	6.00	1.00			2.00	3.00									1.00	1.00		1.00
	Actual	6.00	0.99			1.95	3.14									0.99	0.00 ^a		1.09
12 of 22	Expected	6.00	1.00			2.00	2.00						1.00			1.00			2.00
	Actual	5.77	1.13			2.03	2.00						1.31			0.79 ^b			2.00
13 of 22	Expected	6.00	1.00	1.00		3.00							1.00			1.00			2.00
	Actual	5.64	1.13	0.98		2.96							1.08			0.84 ^b			1.98
14 of 22	Expected	4.00	1.00	1.00		4.00					2.00		1.00						2.00
	Actual	3.85	1.07	1.04		3.99					2.08		1.02						1.95
15 of 22	Expected	2.00	1.00	2.00		6.00				1.00	2.00		1.00						
	Actual	1.89	1.08	1.96		6.00				1.05	2.12		0.98						
16 of 22	Expected	2.00		3.00		4.00			1.00	1.00	2.00				1.00	1.00			
	Actual	2.04		3.03		4.20			1.03	1.05	2.14				0.94	0.88			
17 of 22	Expected	1.00	1.00	2.00		5.00			2.00	1.00	1.00				1.00	1.00			
	Actual	0.88	1.10	2.12		5.13			2.03	1.06	1.08				0.92	1.00			
18 of 22	Expected	1.00	1.00	2.00		3.00	1.00		2.00	1.00					1.00	1.00		1.00	1.00
	Actual	1.03	1.12	2.04		3.11	1.08		2.00	1.01					0.91	0.99		0.91	1.04
19 of 22	Expected	2.00	2.00	2.00		2.00	1.00		1.00						2.00	1.00		1.00	1.00
	Actual	1.94	2.23	2.03		2.08	1.05		0.98						1.89	0.98		1.02	1.02
20 of 22	Expected	2.00	2.00	1.00		6.00	1.00								1.00			1.00	1.00
	Actual	1.97	2.31	1.02		5.54	1.07								0.97			1.01	1.02
21 of 22	Expected	2.00	1.00	1.00		6.00				1.00					2.00			1.00	1.00
	Actual	2.00	1.13	1.05		6.26				1.02					1.87			0.95	1.01
22 of 22	Expected	2.00	1.00	1.00		6.00	1.00			1.00		1.00	1.00		2.00				
	Actual	1.95	1.11	1.02		6.03	1.09			1.02		0.00 ^a	1.03		1.81				

^aMet and Trp were completely destroyed during hydrolysis.

^bThis peptide required extended hydrolysis, which degrades Ser and Thr.

Table 3			
Peptide	Sequence	Solubility	Solvent
1 of 22	1-MAEMKTDAATLAQEA-15	5 mg/mL	50% acetonitrile / 50% water
2 of 22	5-KTDAATLAQEAGNFE-19	5 mg/mL	50% acetonitrile / 50% water
3 of 22	9-ATLAQEAGNFERISG-23	5 mg/mL	50% acetonitrile / 50% water
4 of 22	13-QEAGNFERISGDLKT-27	5 mg/mL	50% acetonitrile / 50% water
5 of 22	17-NFERISGDLKTQIDQ-31	5 mg/mL	50% acetonitrile / 50% water
6 of 22	21-ISGDLKTQIDQVEST-35	5 mg/mL	50% acetonitrile / 50% water
7 of 22	25-LKTQIDQVESTAGSL-39	5 mg/mL	50% acetonitrile / 50% water
8 of 22	29-IDQVESTAGSLQGQW-43	5 mg/mL	50% acetonitrile / 50% water
9 of 22	33-ESTAGSLQGQWRGAA-47	5 mg/mL	50% acetonitrile / 50% water
10 of 22	37-GSLQGQWRGAAGTAA-51	5 mg/mL	50% acetonitrile / 50% water
11 of 22	41-GQWRGAAGTAAQAAV-55	5 mg/mL	50% acetonitrile / 50% water
12 of 22	45-GAAGTAAQAAVRFQ-59	5 mg/mL	50% acetonitrile / 50% water
13 of 22	49-TAAQAAVRFQEAAAN-63	5 mg/mL	100% dimethylsulfoxide (DMSO)
14 of 22	53-AAVRFQEAAANKQKQ-67	5 mg/mL	50% acetonitrile / 50% water
15 of 22	57-RFQEAAANKQKQELDE-71	5 mg/mL	50% acetonitrile / 50% water
16 of 22	61-AANKQKQELDEISTN-75	5 mg/mL	50% acetonitrile / 50% water
17 of 22	65-QKQELDEISTNIRQA-79	5 mg/mL	50% acetonitrile / 50% water
18 of 22	69-LDEISTNIRQAGVQY-83	5 mg/mL	50% acetonitrile / 50% water
19 of 22	73-STNIRQAGVQYSRAD-87	5 mg/mL	100% DMSO
20 of 22	77-RQAGVQYSRADEEQ-91	5 mg/mL	50% acetonitrile / 50% water
21 of 22	81-VQYSRADEEQQALS-95	5 mg/mL	50% acetonitrile / 50% water
22 of 22	85-RADEEQQALSSQMGF-100	5 mg/mL	50% acetonitrile / 50% water

22 FEB 2018

Program Manager or designee, ATCC Federal Solutions

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected by the vendor to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

ATCC® is a trademark of the American Type Culture Collection.
You are authorized to use this product for research use only. It is not intended for human use.

