

## CERTIFICATE OF ANALYSIS

<b>Product Name</b>	SARS-CoV-2 Spike Glycoprotein-Omicron-90% purity
<b>Cat No.</b>	RP30219
<b>Lot No</b>	E1311222E
<b>Sequence</b>	See appendix for details
<b>Modification</b>	N/A
<b>Size</b>	Subpool 1: 3.95mg and Subpool 2: 3.925mg
<b>Storage</b>	-20°C
<b>Recommended Solvent*</b>	Dimethyl sulfoxide(Analytical grade)
<b>HPLC purity</b>	Crude
<b>Appearance</b>	White lyophilized powder
<b>Comments</b>	TFA salts

\*Note: Above recommended solvents for reference only. If there is any request for detailed dissolution conditions, we suggest you choose our 'Peptide Solubility Test Service'.

**Caution:**

For laboratory or further manufacturing use only. Not intended for household use. If you have any questions about the Certificate of Analysis, please contact our customer service representative at 1-877-436-7274 (TollFree), or 1-732-885-9188.

Certified by: *Tingting Cai*      Date: 05/30/2022

Thank you for your patronage to our Peptide services! To maintain this working relationship, we shall be grateful if you can add our webpage URL into your lab website. As a token of appreciation, you will be rewarded by 1,000 EZcoupon™ points. For more information, please contact us by e-mail at [web@genscript.com](mailto:web@genscript.com).

### Appendix:

Subpool 1			
Sequence	MW	Quantity	Purity
MFVFLVLLPLVSSQC	1696.13	25ug	95.0%
LVLLPLVSSQCVNLT	1598.95	25ug	93.9%
PLVSSQCVNLTRTRTQ	1646.87	25ug	92.8%
SQCVNLTRTRQLPPA	1628.86	25ug	96.1%
NLTRTRQLPPAYTNS	1676.83	25ug	96.8%
RTQLPPAYTNSFTRG	1708.88	25ug	93.9%
PPAYTNSFTRGVYYP	1732.90	25ug	90.9%
TNSFTRGVYYPDKVF	1793.98	25ug	93.1%

TRGVYYPDKVFRSSV	1773.99	25ug	91.2%
YYPDKVFRSSVLHST	1799.00	25ug	94.6%
KVFRSSVLHSTQDLF	1764.00	25ug	98.7%
SSVLHSTQDLFLPFF	1737.96	25ug	95.9%
HSTQDLFLPFFSNVT	1752.93	25ug	96.4%
DLFLPFFSNVTWFHV	1869.13	25ug	91.3%
PFFSNVTWFHVISGT	1738.95	25ug	94.6%
NVTWFHVISGTNGTK	1660.84	25ug	94.4%
FHVISGTNGTKRFDN	1692.84	25ug	92.8%
SGTNGTKRFDNPVLP	1602.75	25ug	90.1%
GTKRFDNPVLPFNDG	1676.84	25ug	97.8%
FDNPVLPFNDGVYFA	1714.88	25ug	96.8%
VLPFNDGVYFASIEK	1698.92	25ug	91.2%
NDGVYFASIEKSNI	1669.84	25ug	92.5%
YFASIEKSNIIRGWI	1797.07	25ug	90.1%
IEKSNIIRGWIFGTT	1735.00	25ug	90.1%
NIIRGWIFGTTLDSK	1720.97	25ug	93.3%
GWIFGTTLDSKTQSL	1653.84	25ug	90.1%
GTTLDSKTQSLLIVN	1589.79	25ug	91.9%
DSKTQSLLIVNNATN	1617.76	25ug	90.1%
QSLLIVNNATNVVIK	1625.92	25ug	96.1%
IVNNATNVVIKVCEF	1662.96	25ug	91.5%
ATNVVIKVCEFQFCN	1715.01	25ug	90.1%
VIKVCEFQFCNDPFL	1802.13	25ug	92.3%
CEFQFCNDPFLDHKN	1857.04	25ug	93.9%
FCNDPFLDHKNKNSW	1865.04	25ug	94.6%
PFLDHKNKNSWMESE	1862.04	25ug	90.3%
HKNNKNSWMESEFRVY	1955.17	25ug	91.8%
KSWMESEFRVYSSAN	1820.98	25ug	90.8%
ESEFRVYSSANNCTF	1753.85	25ug	92.8%
RVYSSANNCTFEYVS	1739.87	25ug	93.9%
SANNCTFEYVSQPFL	1719.88	25ug	93.9%
CTFEYVSQPFLMDLE	1822.07	25ug	92.3%
YVSQPFLMDLEGKQG	1711.94	25ug	95.6%
PFLMDLEGKQGNFKN	1737.98	25ug	95.0%
DLEGKQGNFKNLREF	1794.97	25ug	97.6%
KQGNFKNLREFVFKN	1869.14	25ug	94.6%
FKNLREFVFKNIDGY	1890.15	25ug	91.5%
REFVFKNIDGYFKIY	1939.23	25ug	95.1%
FKNIDGYFKIYSKHT	1861.11	25ug	93.5%
DGYFKIYSKHTPIIV	1781.07	25ug	97.7%
KIYSKHTPIIVREPE	1810.11	25ug	90.1%
KHTPIIVREPEDLPQ	1772.02	25ug	96.5%
IIVREPEDLPQGFS	1670.87	25ug	92.8%
EPEDLPQGFSALEPL	1641.78	25ug	91.7%

LPQGFSALEPLVDLP	1595.84	25ug	95.5%
FSALEPLVDLPIGIN	1597.86	25ug	91.6%
EPLVDLPIGINITRF	1696.99	25ug	90.3%
DLPIGINITRFQTL	1714.02	25ug	94.4%
GINITRFQTLALHR	1753.07	25ug	94.0%
TRFQTLALHRSYLT	1820.11	25ug	92.4%
TLLALHRSYLTGDS	1643.85	25ug	91.7%
LHRSYLTGDSSSGW	1662.77	25ug	94.6%
YLTPGDSSSGWTAGA	1469.52	25ug	93.9%
GDSSSGWTAGAAAYY	1463.47	25ug	92.3%
SGWTAGAAAYYVGYL	1549.69	25ug	94.6%
AGAAAYYVGYLQPR	1600.78	25ug	93.1%
AYYVGYLQPRFLK	1832.16	25ug	91.4%
GYLQPRFLKYNEN	1856.09	25ug	92.3%
PRTFLKYNENGTIT	1767.00	25ug	92.8%
LLKYNENGTITDAVD	1665.80	25ug	90.2%
NENGTITDAVDCALD	1550.61	25ug	91.3%
TITDAVDCALDPLSE	1562.70	25ug	90.1%
AVDCALDPLSETKCT	1565.77	25ug	92.8%
ALDPLSETKCTLSF	1652.92	25ug	91.4%
LSETKCTLSFTVEK	1714.00	25ug	91.4%
KCTLSFTVEKGIYQ	1745.06	25ug	90.8%
KSFTVEKGIYQTSNF	1748.94	25ug	97.1%
VEKGIYQTSNFRVQP	1765.97	25ug	93.9%
IYQTSNFRVQPTESE	1782.96	25ug	91.0%
SNFRVQPTESEVRF	1777.00	25ug	92.7%
VQPTESEVRFNITN	1714.92	25ug	91.5%
ESVRFNITNLCPF	1750.04	25ug	90.4%
RFPNITNLCPFDEVF	1812.06	25ug	94.6%
ITNLCPFDEVFNATR	1739.95	25ug	93.3%
CPFDEVFNATRFASV	1702.89	25ug	94.4%
EVFNATRFASVYAWN	1774.94	25ug	90.7%
ATRFASVYAWNRKRI	1839.12	25ug	95.7%
ASVYAWNRKRISNCV	1767.03	25ug	93.9%
AWNRKRISNCVADYS	1782.99	25ug	98.8%
KRISNCVADYSVLYN	1744.97	25ug	90.6%
NCVADYSVLYNLAPF	1688.91	25ug	92.8%
DYSVLYNLAPFFTFK	1825.08	25ug	99.1%
LYNLAPFFTFKCYGV	1783.11	25ug	92.6%
APFFTFKCYGVSPTK	1692.98	25ug	93.9%
TFKCYGVSPTKLNLD	1685.95	25ug	94.6%
YGVSPKLNLDLFTN	1671.88	25ug	91.6%
PTKLNLDLFTNVYAD	1713.91	25ug	92.3%
NLDLFTNVYADSFVI	1720.90	25ug	94.6%
FTNVYADSFVIRGDE	1732.85	25ug	95.2%

YADSFVIRGDEVRQI	1767.94	25ug	92.4%
FVIRGDEVRQIAPGQ	1684.90	25ug	92.0%
GDEVRQIAPGQTGNI	1554.67	25ug	96.2%
RQIAPGQTGNIADYN	1617.73	25ug	92.8%
PGQTGNIADYNYKLP	1650.79	25ug	93.9%
GNIADYNYKLPDDFT	1745.85	25ug	96.7%
DYNYKLPDDFTGCVI	1762.94	25ug	94.4%
KLPDDFTGCVIAWNS	1665.87	25ug	92.3%
DFTGCVIAWNSNKLD	1682.86	25ug	94.6%
CVIAWNSNKLDSKVS	1663.90	25ug	92.3%
WNSNKLDSKVSIGNYN	1725.82	25ug	95.1%
KLDSKVSIGNYNYLYR	1820.02	25ug	94.6%
KVSGNYNYLYRLFRK	1921.21	25ug	98.1%
NYNYLYRLFRKSNLK	1992.29	25ug	98.6%
LYRLFRKSNLKPFR	1967.33	25ug	93.9%
FRKSNLKPFRDIST	1838.08	25ug	90.1%
NLKPFRDISTEIYQ	1853.05	25ug	93.6%
FERDISTEIYQAGNK	1770.90	25ug	94.4%
ISTEIYQAGNKPCNG	1594.75	25ug	91.3%
IYQAGNKPCNGVAGF	1538.73	25ug	95.0%
GNKPCNGVAGFNCYF	1590.79	25ug	94.0%
CNGVAGFNCYFPLRS	1647.88	25ug	96.1%
AGFNCYFPLRSYSFR	1828.07	25ug	97.2%
CYFPLRSYSFRPTYG	1857.10	25ug	90.6%
LRSYSFRPTYGVGHQ	1767.95	25ug	98.2%
SFRPTYGVGHQPYRV	1763.96	25ug	93.0%
TYGVGHQPYRVVLS	1674.91	25ug	91.8%
GHQPYRVVLSFELL	1757.05	25ug	96.4%
YRVVLSFELLHAPA	1714.02	25ug	90.1%
VLSFELLHAPATVCG	1556.83	25ug	92.8%
ELLHAPATVCGPKKS	1550.83	25ug	93.9%
APATVCGPKKSTNLV	1485.76	25ug	95.6%
VCGPKKSTNLVKNKC	1618.97	25ug	94.6%
KKSTNLVKNKCVNFN	1737.04	25ug	94.6%
NLVKNKCVNFNFNGL	1724.00	25ug	90.3%
NKCVNFNFNGLKGTG	1612.82	25ug	97.1%
NFNFNGLKGTGVLTE	1610.77	25ug	90.2%
NGLKGTGVLTESNKK	1545.74	25ug	91.4%
GTGVLTESNKKFLPF	1637.88	25ug	99.0%
LTESNKKFLPFQQFG	1784.03	25ug	90.4%
NKKFLPFQQFGRDIA	1809.08	25ug	94.6%
LPFQQFGRDIADTTD	1723.85	25ug	90.3%
QFGRDIADTTDAVRD	1679.75	25ug	93.9%
DIADTTDAVRDPQTL	1630.72	25ug	92.8%
TTDAVRDPQTLLEILD	1686.82	25ug	97.0%

VRDPQTLILDITPC	1712.97	25ug	95.7%
QTLILDITPCSFGG	1593.80	25ug	92.9%
ILDITPCSFGGVSVI	1520.80	25ug	95.0%
TPCSFGGVSVITPGT	1422.61	25ug	94.6%
FGGVSVITPGTNTSN	1450.56	25ug	91.5%
SVITPGTNTSNQVAV	1487.62	25ug	90.1%
PGTNTSNQVAVLYQG	1548.66	25ug	91.1%
TSNQVAVLYQGVNCT	1596.77	25ug	93.6%
VAVLYQGVNCTEVPV	1590.85	25ug	90.7%
YQGVNCTEVPVAIHA	1600.80	25ug	94.4%
NCTEVPVAIHADQLT	1610.80	25ug	94.6%
VPVAIHADQLTPTWR	1703.95	25ug	93.6%
IHADQLTPTWRVYST	1787.98	25ug	91.8%
QLTPTWRVYSTGSNV	1708.88	25ug	90.2%
TWRVYSTGSNVFQTR	1801.96	25ug	91.3%
Subpool 2			
Sequence	MW	Quantity	Purity
YSTGSNVFQTRAGCL	1603.76	25ug	93.4%
SNVFQTRAGCLIGAE	1565.76	25ug	90.6%
QTRAGCLIGAEYVNN	1608.78	25ug	91.0%
GCLIGAEYVNNSEYEC	1634.79	25ug	92.1%
GAEYVNNSEYECDIPI	1686.80	25ug	95.3%
VNNSEYECDIPIGAGI	1564.72	25ug	90.4%
YECDIPIGAGICASY	1574.78	25ug	93.9%
IPIGAGICASYQTQT	1522.73	25ug	97.3%
AGICASYQTQTKSHR	1650.82	25ug	94.2%
ASYQTQTKSHRRARS	1776.92	25ug	92.3%
TQTKSHRRARVASQ	1712.88	25ug	97.4%
SHRRARVASQSIIA	1638.84	25ug	92.8%
ARVASQSIIAYTMS	1584.80	25ug	91.5%
ASQSIIAYTMSLGAE	1541.73	25ug	91.0%
IIAYTMSLGAENSVA	1539.76	25ug	91.5%
TMSLGAENSVAYSNN	1557.65	25ug	94.6%
GAENSVAYSNNNSIAI	1509.58	25ug	93.9%
SVAYSNNNSIAIPTNF	1597.73	25ug	92.3%
SNNSIAIPTNFTISV	1577.74	25ug	92.3%
IAIPTNFTISVTTEI	1619.86	25ug	93.3%
TNFTISVTTEILPVS	1621.83	25ug	95.2%
ISVTTEILPVSMTKT	1619.93	25ug	91.9%
TEILPVSMTKTSVDC	1623.90	25ug	90.3%
PVSMTKTSVDCTMYI	1675.99	25ug	91.3%
TKTSVDCTMYICGDS	1623.83	25ug	90.5%
VDCTMYICGDSTEC	1626.81	25ug	93.5%
MYICGDSTECNLLL	1661.92	25ug	94.6%
GDSTECNLLLQYGS	1586.68	25ug	92.8%

ECSNLLLQYGSFCTQ	1705.92	25ug	94.4%
LLLQYGSFCTQLKRA	1741.07	25ug	92.3%
YGSFCTQLKRALTGI	1657.94	25ug	93.6%
CTQLKRALTGIAVEQ	1630.92	25ug	97.5%
KRALTGIAVEQDKNT	1643.85	25ug	93.9%
TGIAVEQDKNTQEVF	1678.80	25ug	94.6%
VEQDKNTQEVFAQVK	1762.92	25ug	95.8%
KNTQEVFAQVKQIYK	1824.09	25ug	91.5%
EVFAQVKQIYKTPPI	1761.08	25ug	90.9%
QVKQIYKTPPIKYFG	1810.15	25ug	94.2%
IYKTPPIKYFGGFNF	1792.09	25ug	91.4%
PPIKYFGGFNFSQIL	1728.01	25ug	92.8%
YFGGFNFSQILPDPS	1688.84	25ug	93.9%
FNFSQILPDPSKPSK	1704.93	25ug	90.6%
QILPDPSKPSKRSFI	1713.00	25ug	90.4%
DPSKPSKRSFIEDLL	1731.95	25ug	97.0%
PSKRSFIEDLLFNKV	1793.08	25ug	96.2%
SFIEDLLFNKVTLAD	1724.96	25ug	90.1%
DLLFNKVTLADAGFI	1636.89	25ug	93.9%
NKVTLADAGFIKQYG	1624.84	25ug	94.6%
LADAGFIKQYGDCLG	1570.77	25ug	95.2%
GFIKQYGDCLGDIAA	1570.77	25ug	92.1%
QYGDCLGDIAARDLI	1622.81	25ug	94.4%
CLGDIAARDLICAQK	1589.89	25ug	93.9%
IAARDLICAQKFKGL	1647.00	25ug	94.6%
DLICAQKFKGLTVLP	1646.01	25ug	96.4%
AQKFKGLTVLPPLLT	1626.00	25ug	95.0%
KGLTVLPPLLTDEMI	1640.00	25ug	92.2%
VLPPLLTDEMIAQYT	1704.00	25ug	92.4%
LLTDEMIAQYTSALL	1681.95	25ug	92.3%
EMIAQYTSALLAGTI	1581.84	25ug	92.8%
QYTSALLAGTITSGW	1568.73	25ug	93.1%
ALLAGTITSGWTFGA	1465.66	25ug	94.3%
GTITSGWTFGAGAAL	1409.55	25ug	93.9%
SGWTFGAGAALQIPF	1522.71	25ug	93.7%
FGAGAALQIPFAMQM	1552.87	25ug	91.9%
AALQIPFAMQMAYRF	1758.12	25ug	92.3%
IPFAMQMAYRFNGIG	1716.04	25ug	91.4%
MQMAYRFNGIGVTQN	1729.99	25ug	92.8%
YRFNGIGVTQNVLYE	1772.96	25ug	91.6%
GIGVTQNVLYENQKL	1675.89	25ug	93.9%
TQNVLYENQKLIANQ	1775.96	25ug	94.4%
LYENQKLIANQFNSA	1752.93	25ug	94.6%
QKLIANQFNSAIGKI	1644.92	25ug	91.5%
ANQFNSAIGKIQDSL	1605.76	25ug	93.9%



NSAIGKIQDLSSTA	1491.61	25ug	91.6%
GKIQDLSSTASALG	1434.56	25ug	94.4%
DSLSSTASALGKLQD	1492.59	25ug	95.8%
STASALGKLQDVVNH	1539.70	25ug	96.0%
ALGKLQDVVNHNAQA	1577.75	25ug	96.6%
LQDVVNHNAQALNTL	1649.81	25ug	95.6%
VNHNAQALNTLVKQL	1662.90	25ug	92.9%
AQALNTLVKQLSSKF	1647.92	25ug	96.0%
NTLVKQLSSKFGAIS	1592.84	25ug	90.8%
KQLSSKFGAISSVLN	1578.82	25ug	91.2%
SKFGAISSVLNDIFS	1584.78	25ug	90.1%
AISSVLNDIFSRLDK	1677.90	25ug	96.6%
VLNDIFSRLDKVEAE	1747.95	25ug	94.7%
IFSRLDKVEAEVQID	1761.98	25ug	92.7%
LDKVEAEVQIDRLIT	1741.99	25ug	93.9%
EAEVQIDRLITGRLQ	1740.96	25ug	93.9%
QIDRLITGRLQSLQT	1741.99	25ug	92.8%
LITGRLQSLQTYVTQ	1720.97	25ug	90.4%
RLQSLQTYVTQQLIR	1847.13	25ug	94.3%
LQTYVTQQLIRAAEI	1747.01	25ug	90.9%
VTQQLIRAAEIRASA	1626.86	25ug	94.6%
LIRAAEIRASANLAA	1539.79	25ug	93.5%
AEIRASANLAATKMS	1533.76	25ug	92.3%
ASANLAATKMSECVL	1508.77	25ug	91.5%
LAATKMSECVLGQSK	1565.86	25ug	94.1%
KMSECVLGQSKRVDF	1727.02	25ug	94.4%
CVLGQSKRVDFCGKG	1596.88	25ug	92.8%
QSKRVDFCGKGYHLM	1769.07	25ug	90.6%
VDFCGKGYHLMSFPQ	1729.00	25ug	90.0%
GKGYHLMSFPQSAPH	1656.87	25ug	94.9%
HLMSFPQSAPHGVVF	1653.91	25ug	96.5%
FPQSAPHGVVFLHVT	1635.87	25ug	92.8%
APHGVVFLHVTVVPA	1606.87	25ug	93.9%
VVFLHVTVVPAQEKN	1744.01	25ug	96.0%
HVTVVPAQEKNFTTA	1705.87	25ug	93.9%
VPAQEKNFTTAPAIC	1589.82	25ug	93.8%
EKNFTTAPAICHDGK	1631.82	25ug	90.0%
TTAPAICHDGKAHFP	1565.76	25ug	91.3%
AICHDGKAHFPREGV	1636.84	25ug	91.6%
DGKAHFPREGVFVSN	1659.81	25ug	95.7%
HFPREGVFVSNGTHW	1769.92	25ug	94.6%
EGVFVSNGTHWFVTQ	1707.85	25ug	91.4%
VSNGTHWFVTQRNFY	1856.01	25ug	98.8%
THWFVTQRNFYEPQI	1966.17	25ug	91.5%
VTQRNFYEPQIITTD	1824.99	25ug	94.3%

NFYEPQIITDNTFV	1801.95	25ug	91.8%
PQIITDNTFVSGNC	1609.76	25ug	92.8%
TTDNTFVSGNCDVVI	1584.71	25ug	93.9%
TFVSGNCDVVIGIVN	1536.76	25ug	96.9%
GNCDVVIGIVNNTVY	1579.78	25ug	90.6%
VVIGIVNNTVYDPLQ	1643.89	25ug	94.1%
IVNNTVYDPLQPELD	1729.89	25ug	94.9%
TVYDPLQPELDSFKE	1780.93	25ug	90.5%
PLQPELDSFKEELDK	1787.97	25ug	94.6%
ELDSFKEELDKYFKN	1905.07	25ug	96.3%
FKEELDKYFKNHTSP	1883.07	25ug	91.3%
LDKYFKNHTSPDVDL	1791.96	25ug	93.9%
FKNHTSPDVDLGDIS	1644.75	25ug	93.8%
TSPDVDLGDISGINA	1473.55	25ug	93.1%
VDLGDISGINASVVN	1472.60	25ug	94.6%
DISGINASVVNIQKE	1586.75	25ug	92.9%
INASVVNIQKEIDRL	1711.97	25ug	91.4%
VVNIQKEIDRLNEVA	1739.98	25ug	90.4%
QKEIDRLNEVAKNLN	1783.99	25ug	94.4%
DRLNEVAKNLNESLI	1727.92	25ug	96.2%
EVAKNLNESLIDLQE	1714.88	25ug	94.6%
NLNESLIDLQELGKY	1748.94	25ug	93.0%
SLIDLQELGKYEQYI	1812.03	25ug	92.8%
LQELGKYEQYIKWPW	1981.26	25ug	91.1%
GKYEQYIKWPWYIWL	2073.40	25ug	94.1%
QYIKWPWYIWLGFIA	1984.35	25ug	93.9%
WPWYIWLGFIAGLIA	1806.16	25ug	90.1%
IWLGFIAGLIAIVMV	1616.07	25ug	90.4%
FIAGLIAIVMVTIML	1605.11	25ug	95.3%
LIAIVMVTIMLCCMT	1655.24	25ug	91.3%
VMVTIMLCCMTSCCS	1625.13	25ug	90.1%
IMLCCMTSCCSCLKG	1596.09	25ug	96.7%
CMTSCCSCLKGCCSC	1531.94	25ug	90.4%
CCSCLKGCCSCGSCC	1459.83	25ug	91.7%
LKGCCSCGSCCKFDE	1582.87	25ug	92.8%
CSCGSCCKFDEDDSE	1627.72	25ug	92.6%
SCCKFDEDDSEPVLK	1714.88	25ug	94.6%
FDEDDSEPVLKGVKL	1690.85	25ug	93.9%
DSEPVLKGVKLHYT	1585.81	25ug	94.7%