Cella Technologies

yeast two-hybrid system services

Protein–Protein Interaction Testing Service (CT-100) - Draft Statement of Work

Notes

- *“After you've received an estimate from a supplier, you may request a formal, purchasable Statement of Work (SOW) from that supplier.“ https://app.scientist.com/pages/guides#request_SOW*
- *Please note, some PDF-readers have difficulties with URLs, if clicking on an underlined URL results in an error message in your web browser, then please complete the URL in the URL bar of your web browser through copy-paste or by typing.*
- *This draft SOW is for the purposes of illustration and discussion; example/fictional data has been used; stated prices are subject to change; USD and some other currencies are also supported. For the latest version of this document and for additional (including legal, order, price and technical) information, check our website at https://cellatechnologies.com.*

Article 1. Description of the Services, deliverables, commencement date and turn-around time.

1.1 Supplier (Appendix A) will design and, to the extent possible, construct the hybrid-encoding plasmid(s) that is/are listed in Appendix B.

1.2 To the extent possible, Supplier will perform the protein–protein interaction (PPI) and or prey-dependency control and or bait-dependency control assay(s) that is/are listed in Appendix C.

1.3 Supplier guarantees storage of successfully constructed hybrid-encoding plasmids (Appendix B) until one year after the delivery date of the final report.

1.4 After completion of the project, Client (Appendix A) will receive from Supplier (i) a report which clearly describes the project and its outcome; (ii) the DNA sequence chromatogram trace files; and, if applicable, (iii) the constructed hybrid-encoding plasmid(s).

1.5 The commencement date of the Services is [to be specified (TBS)].

1.6 The expected turn-around time is [to be specified].

Article 2. Payment for the Services.

2.1(a) For the construction and, if applicable, delivery (Article 6.2.a) of the hybrid-encoding plasmid(s), Client agrees to pay to Supplier the total amount as indicated in Table 1 of Appendix B.

2.1(b) For every plasmid that Supplier constructed successfully (Appendix B), payment of the corresponding price is justified. This justification is independent of whether or not (an)other hybrid-encoding plasmid(s) could be constructed successfully.

2.1(c) If, in the rare occasion, Supplier was unable to construct a specific hybrid-encoding plasmid (Article 1.1), then Supplier will be entitled to stop/cancel the construction of this plasmid without breaching the Supplier Agreement (including this Statement of Work (SOW)) and without compensating the Client. Costs already made for this plasmid will not be charged by Supplier. To the extent applicable, shipping charges as indicated in Table 1 of Appendix B will remain the same (unless agreed otherwise). To the extent applicable, upfront payments for this plasmid will be refunded.

2.2(a) For the execution of the assay(s) (Article 1.2), Client agrees to pay to Supplier the total amount as indicated in Table 1 of Appendix C.

2.2(b) For every assay (Article 1.2) that Supplier conducted appropriately, payment of the corresponding price is justified. This justification is independent of (1) whether or not (an)other assay(s) could be conducted; and (2) the outcome of the conducted PPI/control assay(s).

2.2(c) If, in the rare occasion, there is a good reason to not to (continue to) execute a specific assay (Article 1.2), then Supplier will be entitled to cancel (stop) the assay without breaching the Supplier Agreement (including this SOW) and without compensating the Client. Costs already made for this assay will not be charged by Supplier. To the extent applicable, upfront payments for this assay will be refunded.

2.3 No fee is charged for the service as set forth in Article 1.3.

2.4 [Payment requirements to be specified]

Article 3. Confidentiality

3.1.a Client agrees that if, on the basis of Article 3.2, a certain PPI is not related to the PPI (PPIs) that is (are) studied under this SOW, then Supplier is not breaching any confidentiality obligation under the Supplier Agreement (including this SOW), when Supplier (or an affiliated party) publicizes research on this certain PPI for its own purposes.

3.1.b Client agrees that Supplier is not breaching any confidentiality obligation under the Supplier Agreement (including this SOW) when Supplier (or an affiliated party) publicizes internal research in which (a) control assay(s) has/have been used that is/are identical or (seem(s) to be) related to the control assay(s) that are performed under this SOW, unless agreed otherwise.

3.1.c Articles 3.1.a and 3.1.b supplement, amend (and prevail over) relevant parts in Supplier Agreement Section 3.c.

3.2 Under this SOW, two protein–protein interaction (PPIs) are considered mutually related if two or more of the corresponding four pairwise alignment scores, as determined by means of the ClustalW2 program, are higher then 25 (Appendix D).

Article 4. Template DNA

4.1 Client shall provide to Supplier, as soon as reasonably possible, (a) plasmid(s) that contain(s) DNA that correspond(s) to the template DNA sequence(s) that is/are indicated in Appendix B, including relevant information.

4.2 Costs made by Client to provide the plasmid(s) (Article 4.1) will never be compensated or refunded by Supplier.

Article 5 Strains and plasmids

5.1 Supplier is entitled to store (co)transformants (strains) and plasmids referred to in this SOW indefinitely, however, on request of Client, Supplier will destroy this material as soon as reasonably practicable.

5.2 Supplier is entitled to make use of the stored strains and plasmids (Article 5.1) in (future) projects for the Client.

5.3 For the avoidance of doubt, Supplier is not entitled to make use of the stored strains and plasmids (Article 5.1) in projects for third/affiliated parties, nor in internal research projects.

Article 6. Yeast two-hybrid system

6.1 The Matchmaker® Gold Yeast Two-Hybrid System (hereinafter, “MM Gold Y2H system”) will be used in the research services (Article 1). Supplier has got permission from Clontech Laboratories, Inc. for use of the MM Gold Y2H system in the performance of commercial services requested by customers of Supplier.

6.2.a Transfer of the hybrid-encoding plasmid(s) (Appendix B) to Client is optional and only possible if Client legitimately owns a copy of the corresponding backbone vector(s)—shipping charges apply. Supplier will not transfer to Client transformants (strains) that are indicated in Appendix C, unless agreed otherwise.

6.2.b Article 6,2.a amends (and prevails over) relevant parts in Supplier Agreement Section 3.c.

6.3.a The (1) “Notice to Purchaser” section of the MM Gold Y2H system user manual and (2) the “Clontech General Terms & Conditions of Sale”, apply to Client (as applicable) as if Client were the Purchaser and user of the MM Gold Y2H system. The respective information can be found at Clontech’s website (http://www.clontech.com/).

6.3.b Article 6.3.a amends (and prevails over) relevant parts in Supplier Agreement Sections 3.e and 10.

Article 7 Subcontracting DNA synthesis/sequencing work

7.1.a Supplier is entitled to subcontract DNA/oligonucleotide synthesis work that is related to this SOW without the prior written consent of Client.

7.1.b Article 7.1.a and mends (and prevails over) relevant parts in Supplier Agreement Section 3.i.

7.2.a Supplier is entitled to subcontract DNA sequencing work that is related to this SOW without the prior written consent of Client.

7.2.b. Article 7.2.a amends (and prevails over) relevant parts in Supplier Agreement Section 3.i.

Appendix A

Contact Details Supplier

Company/Institute:	*Cella Technologies (statutory name Cella Biotech B.V.)*
Div/Dept:	*-*
Street Address:	*Molengraaffsingel 12-14* *2629 JD Delft* *The Netherlands*
Mailing Address:	*Same as street address*
Shipping Address:	*Same as street address*
Contact Person's Name:	*[to be specified]*
Contact Person's Job Title:	*[to be specified]*
Contact Person's E-mail:	*[to be specified]*
Contact Person's Phone:	*[to be specified]*

Contact Details Client

Company/Institute:	*[to be specified]*
Div/Dept:	*[to be specified]*
Street Address:	*[to be specified]*
Mailing Address:	*[to be specified]*
Shipping Address:	*[to be specified]*
Contact Person's Name:	*[to be specified]*
Contact Person's Job Title:	*[to be specified]*
Contact Person's E-mail:	*[to be specified]*
Contact Person's Phone:	*[to be specified]*

Appendix B

Plasmid DNA (Article 4) containing the DNA sequence that is indicated below (standard genetic code) will be used as template DNA to construct the hybrid-encoding plasmid(s) that have (fictional) Protein 1 (PRTN1) (or a part thereof) as bait/prey fragment.

>PRTN1-encoding_DNA

atgcgcgaagatcatctgcaggcgtgggataacgatcatcagggccagtatcgctttcgcccgccgggctgcaacgtgtgcatgccgtgctgcggcttta
gcaccattccgggcccgaccctgccggtgatttttttatccgaccggcgcgcattgcgtgggcgatatgagcgcgcagtgctatgaagcgccgatgcatct
gtggcgctattatattgcgatgattaacgcgagcgaagaactgcagattggcaaagcgcattgcaacgaatgggtgagcgatcattggtgcgcggtgac
cagcgaactgatgtgcattgatggctgggatgatcatagcattaacgtgagcatgcagatggcgcagcgctgcgtgcgccgcaaacatgattggtgcgt
gggctgcgaaccgtggatggaacattttagctttaccgaagcgcgccagaccatttttatggtggcgctgcagcatcatgcggtgtgcaactatatgattag
caacaaaaaaaattgtgtgcgcgaaaaccctgacctggggcgatgtgtatatggaagcggtgcgccattatagcaaaattcgcgtgctgagcgtgcaggt
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gggcgattgggaacagcagattcatctgctgtatacccatcgcattgatccggtggtgaaccatgaagatggccgccagggcatgccgtgggatccgca
tgcgctgaccagcccgaccaccgtgcagcgccatgatatgcagctgagcgatgtgggccagcgctataccccgatttggtttaaccgcggctatcagcg
caacggcaccatgctgctgtggctgtggcagtggatgattccgaacaaactggtgtggccgctgccggcgcgcagcaaccataaagatgtgaccaact
atctgggcctgtggtgcggcgtgtgggatgcgcatgtgggcaaaagcgaaaaaccgattagcggctttgaaccgtggatgggcctggcgcagtatatgt
ggcagaccaaactgtggggctgcccgcatcagtttgtggattttatttgccagaacgatgcgtggagcacctgggcgctggattggaaaggcggccagtt
tccgggctgggaagatgaaccgccgtataactgctgcccgctgcagaacctggaatgcacctatattaaaggcaccattgaatgcaaaaaaaacatta
cctgcggctgctatatgaaaccgtatgattttgcgtgcggcccgtggtttgatattatgagcaacagcgaacataccggcgaatggtggtatatttatggcgt
gtgctaa

Appendix B (continued)

Plasmid DNA (Article 4) containing the DNA sequence that is indicated below (standard genetic code) will be used as template DNA to construct the hybrid-encoding plasmid(s) that have (fictional) Protein 2 (PRTN2) (or a part thereof) as bait/prey fragment.

>PRTN2-encoding_DNA

atgattaccgcgctgaaacagccggcggatatgtttgtgaacgcggcgctggatgaaattaaaggccagaccatgaaatttgtgtatgcggaactgccg
gatattgatgtgaccaacgatagcattcatagcaaatgggatcatgcgccgccgatggaaatggaagtggaaagcagctatcatccgagcaccacctg
ggaaaccaacgtggaactgctgcgccgcgatgcgtggaccctgaccgattgcgaaaaacataccccgaaaaaatttcgcgtgtgcggcaaacgcga
tcgcattccgtggattctgtattatgcgcatgataaaatgattggcagcatggaaccgggcgaatgcaccaacagcatgtggtgggaaatgtatagcgcg
cgctataaagaatttattaaatgcgcgaacgcggaaattctgaaagtgatggcgcagaacggctatggccatcgcaacatgtgccgcatgggcctgag
caaactgtatatgggctgggcgaccatgaccaaccattggcgcctggaagcgtgggtgagctataaatttaccgcgtggatggcgctgcagctgctgac
ctgggatctggataaccagtatgaaaaccagtattttgtgaaagaagatatgggcatgatggtggatattgtgctggatgtgatgagctataccatgtgctat
ggcggcaccaaacatgatgtgattgaaggcaacgaaaccgtgcattgctttattgcggaaaacatgagcctgcagttttggcagattgcgatgaaccatg
tgtgcgcgtatcgctatggcgtgaaaaaccaggaagcgtggcattgccagatttttttggtggccgattatgtgctttaccgtgcgctttgataaaggctattatg
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gctggatggcgagcccgctgggcaaatgcatgatgcattggatgaactatctgtgctgccgcctgctggattgctatatggaactgtttaaacatgatgcga
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ggcgtggaatattgctttaacgatattagccattatgtgatggaaccggataaaggcggcaaatataacctggtgtttgtgagctggaaagaagaaaacct
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aacgtgggctatgaaattggctttctgctgtgcctggcgtgcaccctgaacggcggccagatggatatgagctgggcgagcagcagcatgctggcgagc
attggcgatgtgcaggtgttttttttttcagaaactggtgtttgatgtgaaaagcaaaaacccgtgcacccagggctggatgtatccgcgcattattcatgtgca
gtattgctttaacattgtggcgtttatgggccataccagcgatgtgcatcagcattgcccgagcatgaccgcgtgctatgaagaaaccgcgcgcatgattag
caccgcgccgaacgtggtgattaaaaaaattagcggctggcgccagattaacggcatgaaacaggtgggctatgaaaaactgattgaagtgtaa

Appendix B (continued)

Table 1. Hybrid-encoding plasmid(s)		
Construct	**Plasmid**	**Price**
C1	pGBKT7	N/A
C2	pGADT7	N/A
C3	pGBKT7-PRTN1(1-500)	€290.00 EUR
C4	pGADT7-PRTN2(1-600)	€320.00 EUR
	Subtotal	€610.00 EUR
	Scientist.com Transaction Fee (5%)	€30.50 EUR
	Shipping Charges	N/A
	Subtotal	€640.50 EUR
	VAT [TBS]%	€[TBS] EUR
	Total (including, as applicable, VAT)	€[TBS] EUR

Constructs C1 and C2 (Table 1) are the 'empty vectors' of the MM Gold Y2H system, which is the yeast two-hybrid system (Article 6) that will be used in the Assays (Article 1.2). Supplier will appropriately design constructs C3 and C4 (Table 1) and attempt to generate these hybrid-encoding plasmids by applying PCR cloning and/or another appropriate technology.

Under this SOW a successfully constructed plasmid means:

I. verification of the constructed plasmid through restriction enzyme analysis confirmed positive;
II. verification of the bait/prey fragment of the hybrid-encoding plasmid through DNA sequencing confirmed positive.

Appendix C

Table 1. Protein–protein interaction and or control assay(s)

Assay	Cotransformant[1]	Bait	Prey	Reporter	Price
1	Y2HGold + C3 & C4	PRTN1(1-500)	PRTN2(1-600)	*ADE2*[2]	€65.00 EUR
2	Y2HGold + C3 & C2	PRTN1(1-500)	-	*ADE2*[2]	€65.00 EUR
3	Y2HGold + C1 & C4	-	PRTN2(1-600)	*ADE2*[2]	€65.00 EUR
				Subtotal	€195.00 EUR
				Scientist.com Transaction Fee (5%)	€9.75 EUR
				Subtotal	€204.75 EUR
				VAT [TBS]%	€[TBS] EUR
				Total (including, as applicable, VAT)	€[TBS] EUR

(1) For constructs C1-C4 refer to Appendix B Table 1.
(2) The activity of the ADE2 reporter gene will be measured qualitatively.

Supplier will attempt to generate specified cotransformant(s) (Table 1) and subsequently measure the activity of specified reporter gene(s) as indicated (Table 1).

Appendix D

Table 1. Establishment of a relationship between two protein–protein interactions by using the corresponding four pairwise alignment scores as calculated by means of ClustalW2. **(a)** Indicated are the four pairwise alignments that should be conducted to establish the relationship between (fictional) PRTN1–PRTN2 interaction and (fictional) PRTN3–PRTN4 interaction. **(b)** As defined in Article 3.2 human MDM2–p53 interaction is related to mouse Mdm2–p53 interaction; **(c)** human MDM2–p53 interaction is not related to human 53BP2–p53 interaction; **(d)** human MDM2–p53 interaction is not related to influenza A virus PA–PB1 interaction; and **(e)** human p53–p53 interaction is related to mouse p53–p53 interaction.

	Organism	Protein	SeqID(1)	AA(2)	Organism	Protein	SeqID(1)	AA(2)	PAS(3)
a	-	PRTN1	-	-	-	PRTN3	-	-	-
	-	PRTN1	-	-	-	PRTN4	-	-	-
	-	PRTN2	-	-	-	PRTN3	-	-	-
	-	PRTN2	-	-	-	PRTN4	-	-	-
b	Homo sapiens	MDM2	Q00987.1	491	Mus musculus	Mdm2	AAB09030.1	489	82
	Homo sapiens	MDM2	Q00987.1	491	Mus musculus	p53	NP_035770.2	390	6
	Homo sapiens	p53	BAC16799.1	393	Mus musculus	Mdm2	AAB09030.1	489	8
	Homo sapiens	p53	BAC16799.1	393	Mus musculus	p53	NP_035770.2	390	76
c	Homo sapiens	MDM2	Q00987.1	491	Homo sapiens	53BP2	Q13625.2	1128	8
	Homo sapiens	MDM2	Q00987.1	491	Homo sapiens	p53	BAC16799.1	393	5
	Homo sapiens	p53	BAC16799.1	393	Homo sapiens	53BP2	Q13625.2	1128	6
	Homo sapiens	p53	BAC16799.1	393	Homo sapiens	p53	BAC16799.1	393	100
d	Homo sapiens	MDM2	Q00987.1	491	Influenza A virus	PA	BAJ10042.1	716	4
	Homo sapiens	MDM2	Q00987.1	491	Influenza A virus	PB1	BAJ10041.1	757	5
	Homo sapiens	p53	BAC16799.1	393	Influenza A virus	PA	BAJ10042.1	716	6
	Homo sapiens	p53	BAC16799.1	393	Influenza A virus	PB1	BAJ10041.1	757	5
e	Homo sapiens	p53	BAC16799.1	393	Mus musculus	p53	NP_035770.2	390	76
	Homo sapiens	p53	BAC16799.1	393	Mus musculus	p53	NP_035770.2	390	76
	Homo sapiens	p53	BAC16799.1	393	Mus musculus	p53	NP_035770.2	390	76
	Homo sapiens	p53	BAC16799.1	393	Mus musculus	p53	NP_035770.2	390	76

(1) sequence accession.version (NCBI); (2) number of amino acid residues; (3) pairwise alignment score calculated by means of ClustalW2 Version 2.1 (http://www.ebi.ac.uk/Tools/msa/clustalw2/help/faq.html#21, https://academic.oup.com/bioinformatics/article/23/21/2947/371686, http://www.clustal.org/clustal2/).