

# **BBF RFC 82.1: Draft for standardization of BioBrick part descriptions.**

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## **1. Purpose**

The present draft for a BBF RFC is intended to improve the BioBrick part descriptions in the Parts Registry using a standardized template that is inserted into the “Part Design” subpage. The standard is designed to allow for an intuitive and efficient integration into the existing part description. The part owners can easily modify the template by deleting headwords that do not match the described part and completing others that do. The Information stored in the “Part Design” subpage CAN be restricted to the proposed headwords but DO NOT HAVE TO.

The proposed template is still subject to change. During the ongoing development process additional comments and recommendations of early users will be considered and integrated. Thus some aspects might need to be added to the standard while others can be omitted. Consequently the final version of this RFC will be a joint effort including many members of the BioBrick community.

## **2. Relation to other BBF RFCs**

BBF RFC 52 formulates information that should be integrated into BioBrick part descriptions in an abstract form.

BBF RFC 67 requests additional information for each part in form of a zip-folder.

As the mentioned RFCs the present RFC is intended to improve the average quality level and usability of the part descriptions. This BBF RFC does not replace any of the preceding RFCs.

## **3. Copyright Notice**

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## **4. Design Note**

The proposed RFC does not change the structure of the “Main Page” but defines a template that is pasted into the source code of the “Part Design” subpage. This template is designed to collect a minimal set of information that are common for most parts. More specific information on the part, operating parameters and characterization experiments SHOULD be collected on the “Main Page”.

Although it seems desirable to have the collected information in a machine-readable format the use of wiki-code appears reasonable for this purpose. This takes the heterogeneity of the designed parts into account and gives the part designer the flexibility to adapt the template to his specific needs. In doing so the adoption process of the new standard among the BioBrick community will be catalyzed.

The scope of the included headwords shall include and address all relevant aspects of a part. Yet, it needs to be kept to a reasonable minimum to limit the time necessary to complete the template. Additionally it seems important to have the template designed in a way that it is self-explanatory and no additional tutorial or manual is needed for its completion. This is achieved using the comment function of the wiki-code.

A headword can either be integrated by deleting the code `<!--` and `-->` or be excluded from the part description by deleting the corresponding line. In case that there is only a small number of meaningful answers to a headword these answers are predefined and separated by the character `/`. The part designer can quickly choose the appropriate one and delete the others.

## 5. The source code

```
<br>'''Keywords:'''
<!--These keywords are necessary to find your part using a fulltext sarch.-->
<!--keyword_1, keyword_2, keyword_3, keyword_4, keyword_5-->

<br>'''Abbreviations:'''
<!--*used_abbreviation_1 = full_name_of_used_abbreviations_1-->
<!--*used_abbreviation_2 = full_name_of_used_abbreviations_2-->

===Design Notes===

'''Related BioBrick:'''
<!--*Other versions:[http://partsregistry.org/wiki/index.php?title=Part:BBa_????? BBa_?????:
Name_of_part] -->
<!--*Related BioBricks:[http://partsregistry.org/wiki/index.php?title=Part:BBa_????? BBa_?????:
Name_of_part]

'''Cloning details:'''<br>
<!--*Designed in RFC10/RFC23/RFC25-->
<!--*Mutation C889G to delete XbaI restriction site-->
<!--*Truncation upstream/downstream compared to template, ?explanation?-->

'''Quality control measures:'''<br>
<!--*Test digestion using ?enzyme1? & ?enzyme2?/Not yet performed-->
<!--*Sequencing using primer ?primer_name?/Not yet sequenced-->
<!--*Part was partly sequenced/Part was totally sequenced-->

'''Backbone:'''<br>
<!--*Backbone name: pSB1C3'?backbone_name?-->
<!--*Resistance: Amp/Cp/Kan/-->
<!--*Copynumber: low/medium/high-->

'''Protein coding:'''<br>
<!--*Protein: ?Name_of_gene_product? [Nucleotide 1 to ???]-->
<!--*The protein has the amino acid replacements ???99?? to ???99???.-->
<!--*The protein encoded is posttranslationally modified by ???-->
<!--*Tag: n-terminally fused/c-terminally fused His5/His6/Strep/Flag/other-->

'''Enzymatic activity:'''
<!--none/EC-number: ?.?.?.?-->

'''Cytotoxicity:'''<br>
<!--none/not known/cytotoxic for ''organism name''-->

'''Safety notes:'''<br>
<!--Known and anticipated safety issues: none/health_risk/environmental_risk-->
<!--Known and anticipated security issues.-->

'''Intellectual property:'''
<!--Information on patent situation.-->
<!--Intellectual property claims made by the authors.-->
```

```

'''Contact information:'''
<!--http://igem.org/User_Information.cgi?user_id=???/email-->

===Source===

'''Source:'''<br>
<!--*Commercial system: plasmid name, system name, company name-->
<!--*Plasmid: p???, provided by ?name_of_person?, ?institute/university?, ?country?-->
<!--*Preexisting BioBrick ?Bba_number?-->
<!--*cDNA Clone: ?clone_name?, ?company_name?-->
<!--*Synthesized by ?company_name?-->

<!--'''Forward Primer:'''<br><code>5'- ??? - 3'/</code><br>-->
<!--'''Reverse Primer:'''<br><code>5'- ??? - 3'/</code><br>-->

'''Organism:'''<br>
<!--*Genesequence derived from ''?organism_name?''-->
<!--*Codonoptimized for ''?organism_name?''-->
<!--*Designed for the following Chassis: ''?organism-name?''-->
<!--*Statement about functionality in other chassis.-->

===References===
<!-- Here you find templates to insert references to important publications, GenBank entries, PDB
structures and so on-->

'''Literature references:'''<br>
<!--[http://www.ncbi.nlm.nih.gov/pubmed/?PMID? ''Pubmed:'' ?Author(s)?, ?year?: ?title?]>

'''Database references:'''<br>
<!--[http://www.ncbi.nlm.nih.gov/nuccore/?accessNr? ''GenBank'': ?title?]>
<!--[http://www.ebi.ac.uk/interpro/IEntry?ac=?accessNr? ''Interpro'': ?title?]>
<!--[http://www.uniprot.org/uniprot/?accessNr? ''Uniprot'': ?title?]>
<!--[http://pfam.sanger.ac.uk/family/?accessNr? ''Pfam'': ?title?]>
<!--[http://www.rcsb.org/pdb/explore/explore.do?structureId=?accessNr? ''PDB'': ?tile?]>
<!--[http://www.brenda-enzymes.info/php/result_flat.php4?ecno=?accessNr? ''Branda'': ?title?]>

```

## 6. Outlook

To reach the goal of widely accepted standardized BioBrick part descriptions 1) the final version of this RFC should be created involving the BioBrick community and 2) this RFC should be presented and promoted within the BioBrick community.

If these objectives are accomplished the template for standardized part descriptions could be set as the standard for new “Part Design” subpages. Part designers would not have to to past the source code into each new “Part Design” subpage and a broad usage in the community would be guaranteed without ongoing promotion of this RFC.

## 7. Authors' Contact Information

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## 8. References

- [1] Anderson C. et al.: Instructions to BBFRFC Authors. BBFRFC0, November 2008
- [2] Slomp A. and Ekkers D.: BBF RFC52: Documentation of BioBrick parts, October 2010
- [3] Culvier P. et al.: BBF RFC 67: detailed Information Standard, October 2010
- [4] Müller K. M. and Arndt K. M.:Standardization in Synthetic Biology,