

Annotation of plasmid sequences

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Summary description:

These are recommendations for choosing *key words* and for *sequence file annotations* when preparing a plasmid description for database entry.

Usage Keywords/Tags	plasmid, key words, annotation
Category	Protocol
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Collection(s) Contributed To	TMESCSR Protocols

Plasmid Annotation

The following information is intended to provide you, a potential user of the Stocks-Plasmid Resource Collection, with information that improves the description of your plasmid. These guidelines will help you complete your plasmid submission in a consistent format that has annotations that will be helpful to others.

Please prepare your plasmid sequence files in GenBank (.gb) format. GenBank files may be generated in a variety of applications; however, we recommend using Vector NTI if possible. Additional computer based applications that may generate GenBank formatted files include DNA Star, MacVector, and SimVector. Please include as many key features in the GenBank file annotation as possible. Guidelines for sequence file annotation are described below.

Required annotations (if applicable):

1. Lox sites
2. FRT sites
3. Promoter regions (for example Pgk, EM7, etc.)
4. Reporter regions (for example fluorescent proteins, LacZ, luciferase, etc.)
5. Antibiotic resistant and/or selectable marker regions (for example AmpR, NeoR, KanR, PuroR, HygroR, DT-A, TK, etc.)
6. Location of all exons

If relevant, please include the following additional annotations:

1. 5' UTRs, 3' UTRs, and other important regulatory regions
2. Polyadenylation sites (such as SV40, bovine GH PolyA, β -globin PolyA, etc.)
3. Nuclear localization signals (NLS)
4. Translational enhancers (such as IRES)
5. Unique/important restriction sites*
6. Mutations (such as point mutations)
7. Primary sequencing oligonucleotides (such as M13F, M13R, T3, T7, etc.)**
8. Tags (such as FLAG-tag, Myc-tag, biotin, etc.)

* Restriction enzyme sites should be limited to critical sites. Please do not include every restriction site in the plasmid.

** Primer annotation should be limited to critical regions. Please do not include unnecessary oligonucleotide sequences in your annotation.

Please note:

1. Plasmid annotation should be concise, yet include features that are critical to the particular plasmid and features that

will be useful to individuals viewing the plasmid description.

2. Once you have generated the annotated GenBank file it may be uploaded in the "GenBank File" field.

Key word usage

The following information is intended to provide you, a potential user of the Stocks-Plasmid Resource Collection, with information that facilitates your plasmid submission. Keywords will help all users to quickly identify which plasmid(s) will best suit his/her research. When entering a plasmid into the Stocks-Plasmids Resource Collection, please follow these guidelines to determine keyword usage.

1. Type/usage (gene targeting, RMCE , basal vectors)
2. Importance (genes expressed, reference genome expression: Pdx1 , nephrocan)
3. Promoters used (P_{gk}, EM7, etc.)
4. Species if appropriate (e.g. human, mouse, rat)
5. Reporters (fluorescent protein: GFP, CFP, YFP, cherry etc.; CAT, luciferase, β -gal)
6. Project/Person (project name or P.I.)
7. Tags (FLAG-tag, Myc-tag, etc.)