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KITcontrol

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KITcontrol

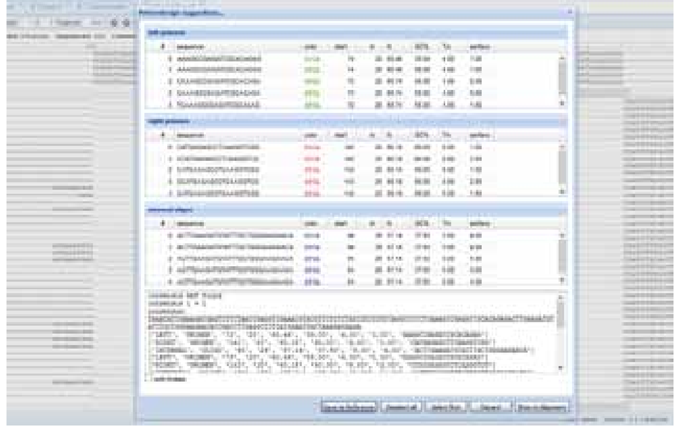
Sequence surveillance application for QM of molecular diagnostic especially certified PCR-based applications

The software KITcontrol was developed to report automatically new sequences and keywords within the NCBI-databases. The specificity of PCR-Kits is validated by reports and the continuation of the product certification (eg. CE) is ensured.

Valuable concept of BLAST, CLUSTAL & full text search

As first step KITcontrol identifies newly uploaded entries within the NCBI-database matching the primer of the PCR-Kit. Using the BLAST-algorithm single base differences are highlighted.
Additionally all new hits of individual keywords such as „Borr" for Borrelia-sequences are reported.

As second step all generated BLAST-hits are aligned using the CLUSTAL-algorithm. All changes are displayed for easy identification of new sequences that might interfere with the projected detection area of the PCR-Kits and their primer-sets respectively.

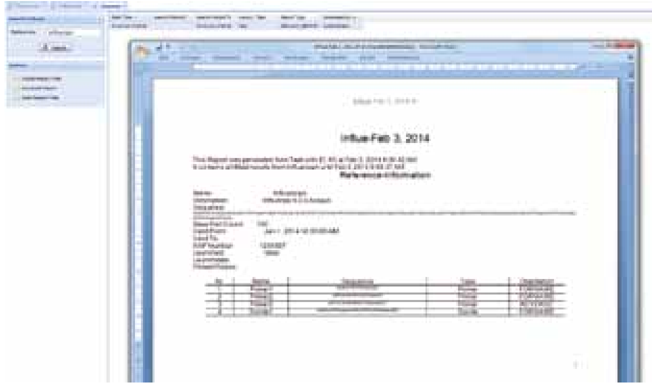


Based on the newly identified sequences the binding of the certified primer-sets is analyzed and - if needed - new primers can be designed using PRIMER3 or your application of choice within the KITcontrol-environment.

The results of the searches and alignments are safely stored in databases and printed as hard-copy for certification proceedings.

All activities are tracable e.g. by linked time stamps

KITcontrol can be accessed via a central browser-based graphical user interface by multiple users within the intranet at the same time.
A central user management is integrated with optional connection to an active directory.
The specification of different user roles and authorizations enable teamwork without reductions in security levels or additional registration processes.



Application of NCBI- or internal sequence databases

KITcontrol typically searches the external NCBI-database for new sequences. Additionally it is also possible to choose internal sequence-databases for the queries or even download sequences and import them into the KITcontrol environment.

Application of open-source algorithms

KITcontrol uses open-source algorithms BLAST, CLUSTAL as well as the PRIMER3 for state-of-the-art and cost-efficient applications. You can choose an open source PostgreSQL-database for minimized license fees or commercial solutions.

Easy Plug&Play installation

Beside the typical server-based installation KITcontrol is optionally provided in a Plug&Play configuration that can easily be connected to existing internal networks or clusters providing the necessary data-storage and back up infrastructure.
The KITcontrol-unit is simply connected to the internal network by Plug&Play without additional installation.

The databases are also capable of using external storage within the network or even cloud-services.

Your advantages

- > Automated quality management for PCR-Kits
- > Generation of reports guarantee the certified status
- > Central GUI enables access by multiple users without restrictions
- > The incorporated algorithms are state-of-the-art as well as open-source
- > Integrated time-stamps for complete and locked documentation
- > Integrated user management (opt. active directory)
- > Email alerts keep you updated on sequence- as well as text-changes within the NCBI-database