

# Antibody Technologies and Attrition Rates - an Industry Analysis 2013

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## Abstracts

### Product Description

The report “Antibody Technologies and Attrition Rates – an industry analysis 2013” is based on the identification of the antibody generation technologies of 504 naked antibodies in clinical or market stages. Information was retrieved from scientific and corporate publications as well as from patent and legal literature. The report provides descriptive statistics of the 504 naked antibodies and their status during the study period of January 1, 2013 to February 28, 2013. The antibodies are categorized as active during the study period or discontinued during or before the study period. Attrition rates were calculated across a number of variables.

### Descriptive statistics of the 504 naked antibodies include the following variables:

Unique antibody identifiers (drug codes; generic name; brand name)

Antibody format (full length, Fab, scFv, VH/VL, nanobody, bispecific, cocktail/polyclonal)

In vitro antibody generation technologies (display technologies from CAT, Dyax, Morphosys, BioInvent, Domantis, Genentech, others)

In vivo antibody generation technologies (chimeric, primatized, nanobodies, deimmunized, human engineered, humaneered, humanized, XenoMouse, HuMab mouse, KM mouse, VelocImmune mouse, human B-cell derived)

Animal species of parental wild-type antibody (mouse, rat, rabbit, hamster,

cynomolgus monkey, camelid)

Antibody status (active/discontinued)

Year of failure

Reason for failure (efficacy, pharmacokinetics/ADME; safety; technical, business, next generation, inactivity)

Target

Immunoglobulin class and IgG isotype

Highest phase

Therapeutic area of lead indication

Companies (developer, licensor/originator)

An Antibody Data Sheet was prepared for each unique antibody containing the retrieved information and the source of information in the form of a scientific reference or a hyperlink leading to the website from which the information was obtained.

The analysis essentially evaluated the question whether there are differences in clinical attrition rates between in vitro and in vivo antibody generation technologies as well as within the different in vitro and in antibody generation technologies. Attrition rate was defined as the percentage of failed antibodies of all active and inactive antibodies.

### **Benefits from the data and the analysis:**

Understand the historical and present state of the art use of antibody technologies;

Learn the success rate of each antibody generation technology;

Understand the reasons for failure of antibodies in clinical development;

Appreciate the relative value of generic and of IP protected antibody

technologies;

Know which antibody technologies are using your competitors;

Know the preferred antibody formats, IgG isotypes, development indications, parental wild-type animal species.

Learn the influence of the target for the success rate of the selected antibody technology.

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## **6 ADDENDUM: ANTIBODY DATA SHEETS**

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