

# Rabbit Monoclonal Antibody Development

The rabbit immune system generates and affinity matures antibodies using mechanisms that differ from those of mice and other rodents. Antibodies produced by rabbits normally have 10 to 100-fold higher affinity for antigen than mouse monoclonal antibodies.

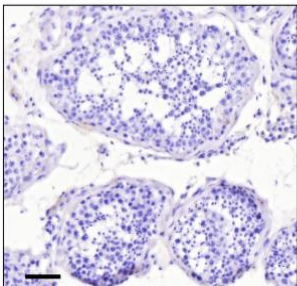
The combination of AvantGen's optimized rabbit immunization protocol and robust yeast display system enables the rapid generation of rabbit monoclonal antibodies with extraordinarily high affinity (0.001-1.0 nM) and exquisite specificity. The yeast display system is uniquely suited for displaying rabbit antibodies, which have an additional disulfide bond in their light chain that is believed to be important for the high affinity and specificity observed for rabbit antibodies.

Rabbit monoclonal antibodies are particularly desirable for diagnostics and research applications. To date, AvantGen has successfully completed numerous rabbit monoclonal antibody generation projects for big pharma, biotech and government entities.

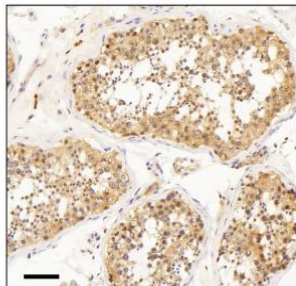
AvantGen Technology Platform	
Attributes	Performance
<b>Affinity</b>	Majority of antibody clones isolated with our approach exhibit affinity in sub-nM to low pM range
<b>Specificity</b>	Antibodies can be generated to distinguish between very similar molecules with subtle structural variations, such as single point mutations, various modifications, different cleavage sites, etc.
<b>Applications</b>	Unique approaches to isolate antibody clones suitable for different applications, such as IHC, flow, PK (anti-idiotypic), etc.
<b>Speed</b>	Rabbit mAb can be generated within 5 months, much faster than 8 months required with traditional hybridoma-based rabbit mAb generation approaches
<b>Antibody yield</b>	Antibody genes are identified, and high expression constructs are used for transient transfection to produce recombinant rabbit mAbs with a much higher yield than hybridomas

## IHC Application

Human Testis Isotype control

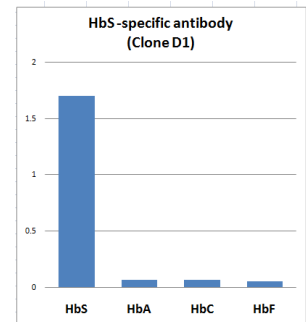


Human Testis

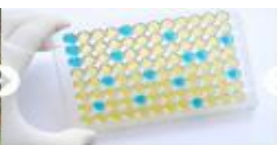


## Single Point Mutation Specificity

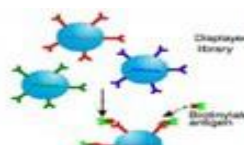
HbS: VHLTP**V**EKSAV  
 HbA: VHLTP**E**EKSAV  
 HbC: VHLTP**K**EKSAV  
 HbF: GHFTEEDKATITS



Rabbit Immunization



Serum Testing



Library Screening



mAb clone testing

Rabbit mAb production

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