

## 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.

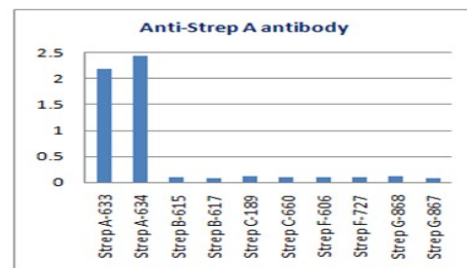
Rabbit monoclonal antibodies are particularly desirable for diagnostic, reagent and other, including therapeutic, applications. AvantGen has successfully completed numerous rabbit monoclonal antibody generation projects for commercial and government entities.

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
<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 or stable cell line development to produce much higher mAb yield than hybridomas

### High affinity rabbit mAbs specific for phospho-peptides

Antigen	Clone	Affinity (nM)	Peptide sequence
AVG300	D4	0.01	LALQAQVPDELVTK
AVG301	E11	0.01	DITSDTSGDFR
AVG308	A6	0.04	Phospho-peptide specific VADPDHDHTGFLTE(pY)VATR
AVG309	H4	0.04	Phospho-peptide specific RPHFPQF(pS)YSASGTA

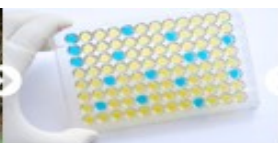
### High affinity rabbit mAb specific for group A streptococcus



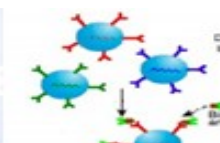
Antigen	Capture antibody	Affinity (nM)	Detection Antibody	Affinity (nM)
Strep-A	H2	0.05	C79	0.05



Rabbit Immunization



Serum Testing



Library Screening



mAb clone testing



Rabbit mAb production