

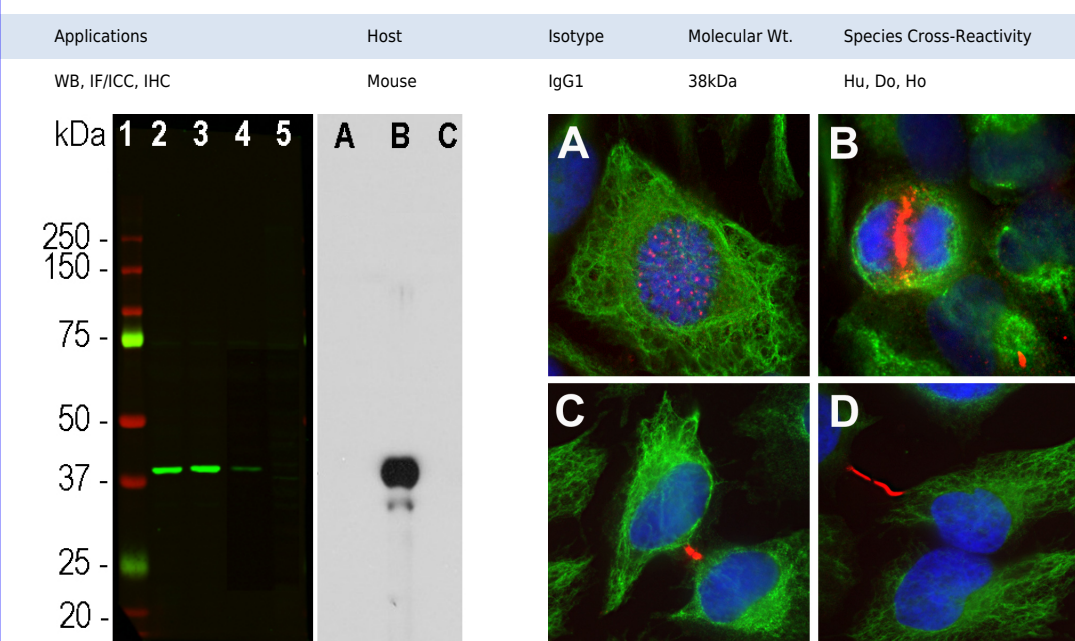
#### References:

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A sequence alignment of the 3 human aurora molecules can be downloaded from [http://encorbio.com/Alignments/Aurora\\_alignment.pdf](http://encorbio.com/Alignments/Aurora_alignment.pdf).

# Aurora Kinase B Mouse Monoclonal Antibody

MCA-6G2



#### Background:

Aurora proteins are a family of serine/threonine protein kinases which play a key role in the regulation of cell division which were originally discovered in studies of *Drosophila* (1). Mammalian genomes encode 3 aurora kinases named aurora A, B and C, each containing a variable regulatory domain at the N terminus followed by a catalytic serine/threonine kinase domain which is almost identical between them, see [here](#) for sequence alignment. As a result it is possible to generate antibodies which react with only one aurora kinase or cross react with two or more other kinases. Aurora A and B are almost ubiquitous in distribution while C is normally only expressed in testis. Aurora A is required for centrosome duplication, entry into mitosis, formation of bipolar spindle and mitotic checkpoint (3). Aurora B is a chromosomal passenger protein and essential for chromosome condensation, kinetochore functions, spindle checkpoint activation and cytokinesis completion (4). Aurora C is normally involved in spermatogenesis, but may also be expressed in many transformed cell lines and tumors and has been less well studied to date (5). The aurora kinases are essential for the progression to cell division and as a result there has been much interest in the development of drugs aimed at inhibiting their activity for use as anticancer agents (6,7). We have made a panel of antibodies to the aurora kinases, concentrating originally on aurora A and B, and we made recombinant full length human aurora constructs of all three to document their potential cross reactivity.

The MCA-6G2 antibody was made against full length human aurora B protein and was shown to bind only aurora B, but not aurora A or C. The antibody can be used to identify dividing or soon to be dividing cells since it binds to the inner centromere and is also an excellent marker of midbodies both during and after cell division. We also supply other aurora specific antibodies, to aurora A [MCA-1A11](#), antibodies to both aurora A and B, [MCA-5A12](#) and [MCA-6G2](#), and another which is aurora B specific, [MCA-3F11](#).

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#### Abbreviation Key:

mAb—Monoclonal Antibody pAb—Polyclonal Antibody WB—Western Blot IF—Immunofluorescence ICC—Immunocytochemistry  
 IHC—Immunohistochemistry E—ELISA Hu—Human Mo—Monkey Do—Dog Rt—Rat Ms—Mouse Co—Cow Pi—Pig Ho—Horse Ch—Chicken  
 Dr—D. rerio Dm—D. melanogaster Sm—S. mutans Ce—C. elegans Sc—S. cerevisiae Sa—S. aureus Ec—E. coli.