Supplementary Table S1. The list of primers for constructing Aurora-A wild type and truncated plasmids and mutagenesis.

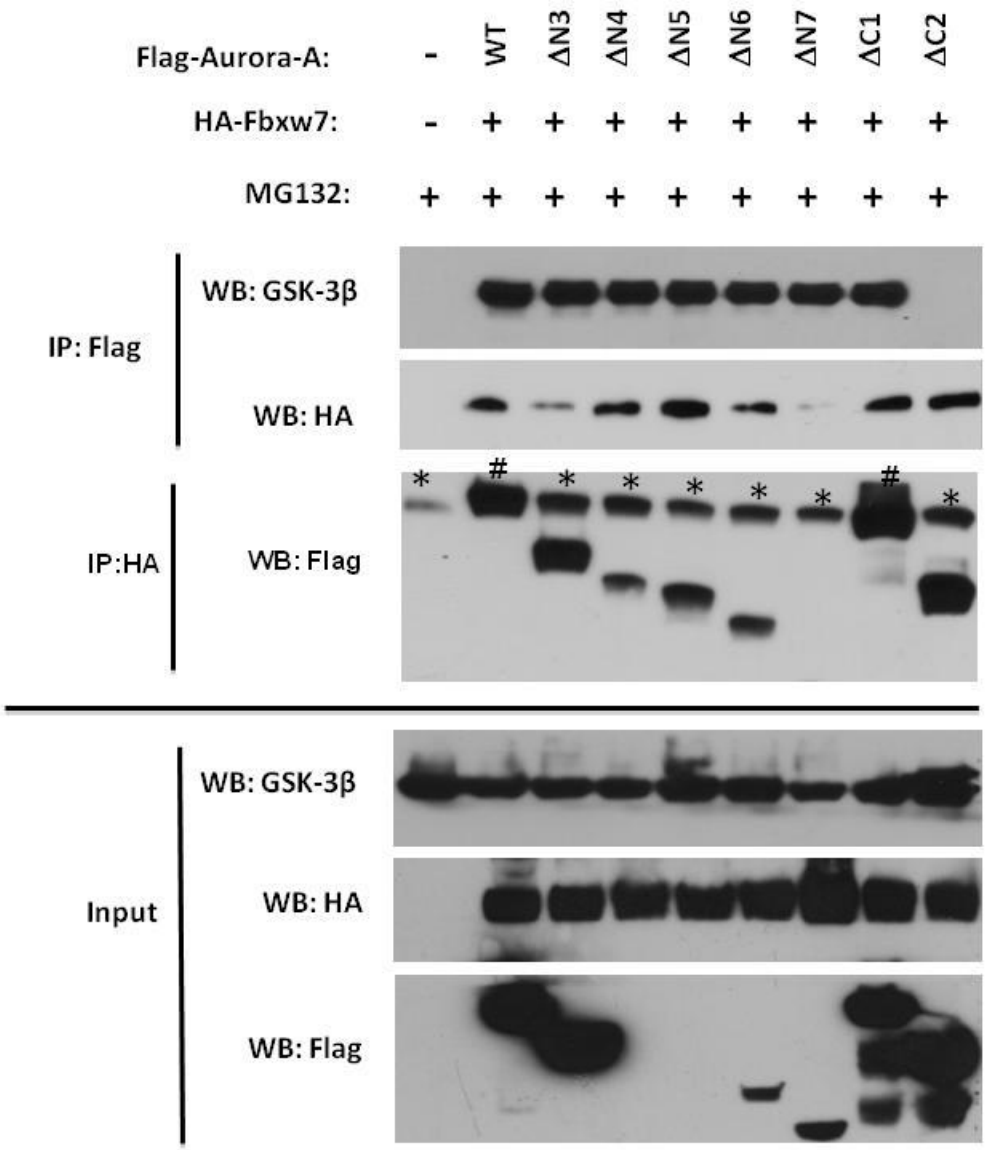
	Primer Name	Sequences
1	hAURKA-WT-BglII-For	5'-GAAGATCTGATGGACCGATCTAAAGAAAACTGC-3'
2	hAURKA-WT-XbaI-Rev	5'-CGTCTAGACTAAGACTGTTTGCTAGCTGATTC-3'
3	hAURKA-C1-XbaI-Rev	5'-CGTCTAGACTAATTTGCTGTGATCCAGGGGTGT-3'
4	hAURKA-C2-XbaI-Rev	5'-CGTCTAGACTACAGGGCATTTGCCAATTCTGT-3'
5	hAURKA-C3-XbaI-Rev	5'-CGTCTAGACTACTCATCAAACTTTGAAAGTTTCTG-3'
6	hAURKA-N1-BglII-For	5'-GAAGATCTGGTTCAGAATCAGAAGCAGAAGCAATTGCAGGC-3'
7	hAURKA-N2-BglII-For	5'-GAAGATCTGAGGCCACTGAATAACACCCAAAAGAGC-3'
8	hAURKA-N3-BglII-For	5'-GAAGATCTGCCCCTGCCATCGGCACCTGAAAATAATCCT-3'
9	hAURKA-N4-BglII-For	5'-GAAGATCTGGAAATTGGTCGCCCTCTGGGTAAAGG-3'
10	hAURKA-N5-BglII-For	5'-GAAGATCTGGGAGTGGAGCATCAGCTCAGAAGAGAA-3'
11	hAURKA-N6-BglII-For	5'-GAAGATCTGGATGCTACCAGAGTCTACCTAATTCTGG-3'
12	hAURKA-N7-BglII-For	5'-GAAGATCTGGATGAGCAGAGAACTGCTACT-3'
13	hAURKA-T217A/E221A-For	5'-GCACCACTTGGAGCAGTTTATAGAGCACTTCAGAAAC-3'
14	hAURKA-T217A/E221A-Rev	5'-GTTTCTGAAGTGCTCTATAAACTGCTCCAAGTGGTGC-3'
15	hAURKA-S226A-For	5'-GAGAACTTCAGAAACTTGCAAAGTTTGATGAGCAG-3'
16	hAURKA-S226A-Rev	5'-CTGCTCATCAAACTTTGCAAGTTTCTGAAGTTCTC-3'
17	hAURKA-S245A-For	5'-GGCAAATGCCCTGGCTTACTGTCATTCGAAG-3'
18	hAURKA-S245A-Rev	5'-CTTCGAATGACAGTAAGCCAGGGCATTTGCC-3'
19	hAURKA-S387A-For	5'-CCCTGGATCACAGCAAATGCATCAAAACCATCAAATTGCC-3'
20	hAURKA-S387A-Rev	5'-GGCAATTTGATGGTTTTGATGCATTTGCTGTGATCCAGGG-3'
21	hAURKA-S245A-For	5'-GGCAAATGCCCTGGCTTACTGTCATTCGAAG-3'
22	hAURKA-S245A-Rev	5'-CTTCGAATGACAGTAAGCCAGGGCATTTGCC-3'
23	hAURKA-S387A-For	5'-CCCTGGATCACAGCAAATGCATCAAAACCATCAAATTGCC-3'
24	hAURKA-S387A-Rev	5'-GGCAATTTGATGGTTTTGATGCATTTGCTGTGATCCAGGG-3'
25	hAURKA-E230A-For	5'-CAAAGTTTGATGCGCAGAGAACTGC-3'
26	hAURKA-E230A-Rev	5'-GCAGTTCTCTGCGCATCAAACTTTG-3'

Supplementary Figure S1. Immunoprecipitation identifies which truncated Aurora-A binds to FBXW7 or GSK3β. HA-tagged FBXW7 and Flag-tagged truncated Aurora-A was expressed in human 293T cells, followed by immunoprecipitation of the proteins with anti-Flag antibodies and immunoblotting with antibodies against HA and GSK3β (upper panel); or immunoprecipitation of the proteins with anti-HA antibodies and immunoblotting with antibodies against Flag (middle panel). Lower panel shows the input levels of GSK3β, FBXW7 and Aurora-A proteins in the lysates. The result indicates only ΔN7 is unable to interact with FBXW7 and the ΔC2 can't bind to GSK3β.

Supplementary Figure S2. Analysis of transcriptional levels of tranfected wild type and mutant Aurora-A using semi-quantitative RT-PCR. Total RNA was purified from 239T cells transfected with wild type or mutant Aurora-A using TRIzol (Invitrogen) according to the manufacturer's instructions and then 5 μg of each sample was reverse transcribed using the SuperScript II RNaseH first-strand synthesis system (Invitrogen). PCR was performed with 2 μl of cDNA from each sample using Extaq DNA polymerase (TAKARA). Primers for Flag-tagged Aurora-A were as follows: sense 5'-GACTACAAAGACCATGACGGT-3' (for Flag) and antisense 5'-TGGTGCATATTCCAGAATTAGG -3' (Aurora-A 621-642).

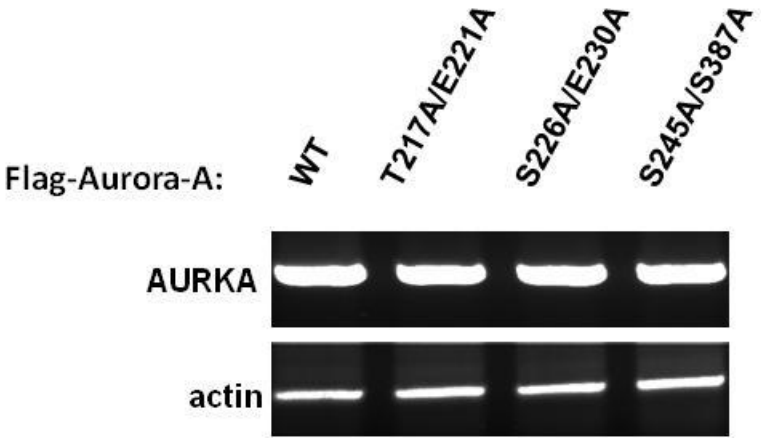
Supplementary Figure S3. Multiple feedback loops among Pi3K-AKT-GSK3β-Aurora-A pathway.

Supplementary Figure S1



Note: #the size of wild type Aurora-A and ΔC1 is very close to immunoglobulin heavy chain; * immunoglobulin heavy chain.

Supplementary Figure S2



Supplementary Figure S3