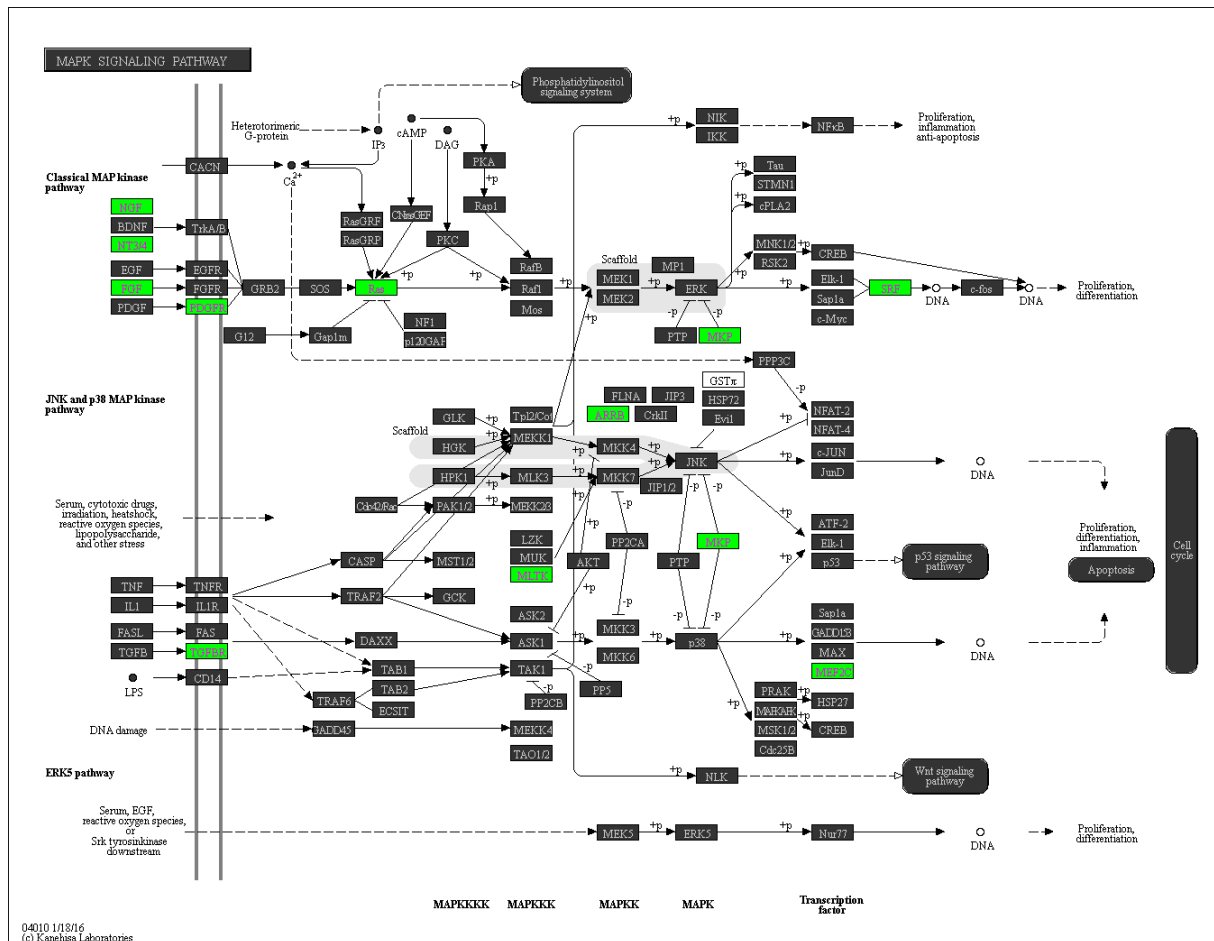


Supplementary Figures

Figure S1. KEGG pathway enrichment analysis on the MAPK signaling pathway. The microarray-detected transcriptome profiles of human upper tract urothelial carcinoma and adjacent normal tissues were compared and mapped by using a Partek Genomics software for pathway analysis. The up-regulated genes are highlighted in green boxes.



PI3K-AKT SIGNALING PATHWAY

The diagram illustrates the PI3K-AKT signaling pathway, showing the flow of information from upstream activators to downstream effectors.

Upstream Activators:

- GPCR:** Activated by Chemokines, Hormones, Neurotransmitters.
- RTK:** Activated by EGF, Insulin, IGF1, FGF, PDGF, TGF- α , NGF, BDNF, FGF-2, IGF-1, IGF-2, IGF-3, IGF-4, IGF-5, IGF-6, IGF-7, IGF-8, IGF-9, IGF-10, IGF-11, IGF-12, IGF-13, IGF-14, IGF-15, IGF-16, IGF-17, IGF-18, IGF-19, IGF-20, IGF-21, IGF-22, IGF-23, IGF-24, IGF-25, IGF-26, IGF-27, IGF-28, IGF-29, IGF-30, IGF-31, IGF-32, IGF-33, IGF-34, IGF-35, IGF-36, IGF-37, IGF-38, IGF-39, IGF-40, IGF-41, IGF-42, IGF-43, IGF-44, IGF-45, IGF-46, IGF-47, IGF-48, IGF-49, IGF-50, IGF-51, IGF-52, IGF-53, IGF-54, IGF-55, IGF-56, IGF-57, IGF-58, IGF-59, IGF-60, IGF-61, IGF-62, IGF-63, IGF-64, IGF-65, IGF-66, IGF-67, IGF-68, IGF-69, IGF-70, IGF-71, IGF-72, IGF-73, IGF-74, IGF-75, IGF-76, IGF-77, IGF-78, IGF-79, IGF-80, IGF-81, IGF-82, IGF-83, IGF-84, IGF-85, IGF-86, IGF-87, IGF-88, IGF-89, IGF-90, IGF-91, IGF-92, IGF-93, IGF-94, IGF-95, IGF-96, IGF-97, IGF-98, IGF-99, IGF-100, IGF-101, IGF-102, IGF-103, IGF-104, IGF-105, IGF-106, IGF-107, IGF-108, IGF-109, IGF-110, IGF-111, IGF-112, IGF-113, IGF-114, IGF-115, IGF-116, IGF-117, IGF-118, IGF-119, IGF-120, IGF-121, IGF-122, IGF-123, IGF-124, IGF-125, IGF-126, IGF-127, IGF-128, IGF-129, IGF-130, IGF-131, IGF-132, IGF-133, IGF-134, IGF-135, IGF-136, IGF-137, IGF-138, IGF-139, IGF-140, IGF-141, IGF-142, IGF-143, IGF-144, IGF-145, IGF-146, IGF-147, IGF-148, IGF-149, IGF-150, IGF-151, IGF-152, IGF-153, IGF-154, IGF-155, IGF-156, IGF-157, IGF-158, IGF-159, IGF-160, IGF-161, IGF-162, IGF-163, IGF-164, IGF-165, IGF-166, IGF-167, IGF-168, IGF-169, IGF-170, IGF-171, IGF-172, IGF-173, IGF-174, IGF-175, IGF-176, IGF-177, IGF-178, IGF-179, IGF-180, IGF-181, IGF-182, IGF-183, IGF-184, IGF-185, IGF-186, IGF-187, IGF-188, IGF-189, IGF-190, IGF-191, IGF-192, IGF-193, IGF-194, IGF-195, IGF-196, IGF-197, IGF-198, IGF-199, IGF-200, IGF-201, IGF-202, IGF-203, IGF-204, IGF-205, IGF-206, IGF-207, IGF-208, IGF-209, IGF-210, IGF-211, IGF-212, IGF-213, IGF-214, IGF-215, IGF-216, IGF-217, IGF-218, IGF-219, IGF-220, IGF-221, IGF-222, IGF-223, IGF-224, IGF-225, IGF-226, IGF-227, IGF-228, IGF-229, IGF-230, IGF-231, IGF-232, IGF-233, IGF-234, IGF-235, IGF-236, IGF-237, IGF-238, IGF-239, IGF-240, IGF-241, IGF-242, IGF-243, IGF-244, IGF-245, IGF-246, IGF-247, IGF-248, IGF-249, IGF-250, IGF-251, IGF-252, IGF-253, IGF-254, IGF-255, IGF-256, IGF-257, IGF-258, IGF-259, IGF-260, IGF-261, IGF-262, IGF-263, IGF-264, IGF-265, IGF-266, IGF-267, IGF-268, IGF-269, IGF-270, IGF-271, IGF-272, IGF-273, IGF-274, IGF-275, IGF-276, IGF-277, IGF-278, IGF-279, IGF-280, IGF-281, IGF-282, IGF-283, IGF-284, IGF-285, IGF-286, IGF-287, IGF-288, IGF-289, IGF-290, IGF-291, IGF-292, IGF-293, IGF-294, IGF-295, IGF-296, IGF-297, IGF-298, IGF-299, IGF-300, IGF-301, IGF-302, IGF-303, IGF-304, IGF-305, IGF-306, IGF-307, IGF-308, IGF-309, IGF-310, IGF-311, IGF-312, IGF-313, IGF-314, IGF-315, IGF-316, IGF-317, IGF-318, IGF-319, IGF-320, IGF-321, IGF-322, IGF-323, IGF-324, IGF-325, IGF-326, IGF-327, IGF-328, IGF-329, IGF-330, IGF-331, IGF-332, IGF-333, IGF-334, IGF-335, IGF-336, IGF-337, IGF-338, IGF-339, IGF-340, IGF-341, IGF-342, IGF-343, IGF-344, IGF-345, IGF-346, IGF-347, IGF-348, IGF-349, IGF-350, IGF-351, IGF-352, IGF-353, IGF-354, IGF-355, IGF-356, IGF-357, IGF-358, IGF-359, IGF-360, IGF-361, IGF-362, IGF-363, IGF-364, IGF-365, IGF-366, IGF-367, IGF-368, IGF-369, IGF-370, IGF-371, IGF-372, IGF-373, IGF-374, IGF-375, IGF-376, IGF-377, IGF-378, IGF-379, IGF-380, IGF-381, IGF-382, IGF-383, IGF-384, IGF-385, IGF-386, IGF-387, IGF-388, IGF-389, IGF-390, IGF-391, IGF-392, IGF-393, IGF-394, IGF-395, IGF-396, IGF-397, IGF-398, IGF-399, IGF-400, IGF-401, IGF-402, IGF-403, IGF-404, IGF-405, IGF-406, IGF-407, IGF-408, IGF-409, IGF-410, IGF-411, IGF-412, IGF-413, IGF-414, IGF-415, IGF-416, IGF-417, IGF-418, IGF-419, IGF-420, IGF-421, IGF-422, IGF-423, IGF-424, IGF-425, IGF-426, IGF-427, IGF-428, IGF-429, IGF-430, IGF-431, IGF-432, IGF-433, IGF-434, IGF-435, IGF-436, IGF-437, IGF-438, IGF-439, IGF-440, IGF-441, IGF-442, IGF-443, IGF-444, IGF-445, IGF-446, IGF-447, IGF-448, IGF-449, IGF-450, IGF-451, IGF-452, IGF-453, IGF-454, IGF-455, IGF-456, IGF-457, IGF-458, IGF-459, IGF-460, IGF-461, IGF-462, IGF-463, IGF-464, IGF-465, IGF-466, IGF-467, IGF-468, IGF-469, IGF-470, IGF-471, IGF-472, IGF-473, IGF-474, IGF-475, IGF-476, IGF-477, IGF-478, IGF-479, IGF-480, IGF-481, IGF-482, IGF-483, IGF-484, IGF-485, IGF-486, IGF-487, IGF-488, IGF-489, IGF-490, IGF-491, IGF-492, IGF-493, IGF-494, IGF-495, IGF-496, IGF-497, IGF-498, IGF-499, IGF-500, IGF-501, IGF-502, IGF-503, IGF-504, IGF-505, IGF-506, IGF-507, IGF-508, IGF-509, IGF-510, IGF-511, IGF-512, IGF-513, IGF-514, IGF-515, IGF-516, IGF-517, IGF-518, IGF-519, IGF-520, IGF-521, IGF-522, IGF-523, IGF-524, IGF-525, IGF-526, IGF-527, IGF-528, IGF-529, IGF-530, IGF-531, IGF-532, IGF-533, IGF-534, IGF-535, IGF-536, IGF-537, IGF-538, IGF-539, IGF-540, IGF-541, IGF-542, IGF-543, IGF-544, IGF-545, IGF-546, IGF-5

Figure S3. KEGG pathway enrichment analysis on the NOTCH signaling pathway. The microarray-detected transcriptome profiles of human upper tract urothelial carcinoma and adjacent normal tissues were compared and mapped by using a Partek Genomics software for pathway analysis. The up-regulated genes are highlighted in green boxes.

