10320 Camino Santa Fe, Suite G
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RYK Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7677a

Specification

RYK Antibody - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P34925
Other Accession	Q01887
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**160-190**

RYK Antibody - Additional Information

Gene ID 6259

Other Names
Tyrosine-protein kinase RYK, RYK, JTK5A

Target/Specificity
This RYK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 160-190 amino acids from human RYK.

Dilution
WB~~1:1000
IHC-P~~1:50~100

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
RYK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RYK Antibody - Protein Information

Name RYK (HGNC:10481)

Synonyms JTK5A

Function May be a coreceptor along with FZD8 of Wnt proteins, such as WNT1, WNT3, WNT3A

and WNT5A. Involved in neuron differentiation, axon guidance, corpus callosum establishment and neurite outgrowth. In response to WNT3 stimulation, receptor C-terminal cleavage occurs in its transmembrane region and allows the C-terminal intracellular product to translocate from the cytoplasm to the nucleus where it plays a crucial role in neuronal development.

Cellular Location
Membrane; Single-pass type I membrane protein. Nucleus. Cytoplasm. Note=In cells that have undergone neuronal differentiation, the C-terminal cleaved part is translocated from the cytoplasm to the nucleus.

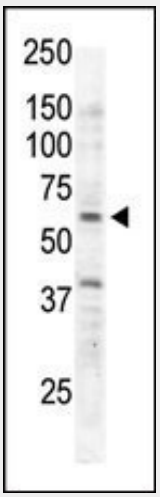
Tissue Location
Observed in all the tissues examined.

RYK Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

RYK Antibody - Images



The anti-RYK Pab (Cat. #AP7677a) is used in Western blot to detect RYK in Jurkat cell lysate.

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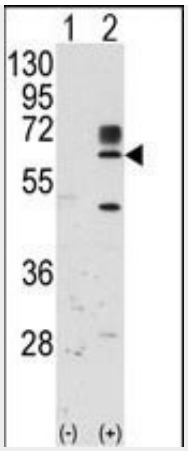
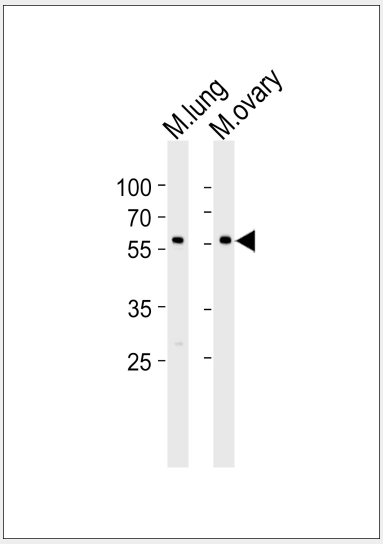
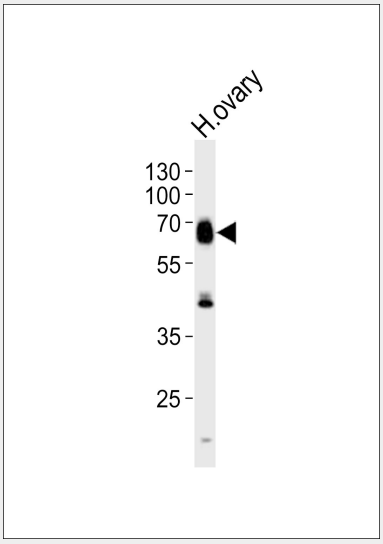


Western blot analysis of RYK (arrow) using rabbit polyclonal RYK Antibody (Cat. #AP7677a).293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the RYK gene (Lane 2) (Origene Technologies).



Western blot analysis of lysates from mouse lung and ovary tissue lysate(from left to right), using RYK Antibody (N175)(Cat. #AP7677a). AP7677a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.



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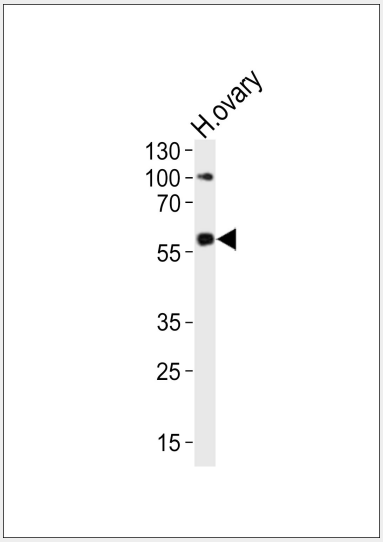
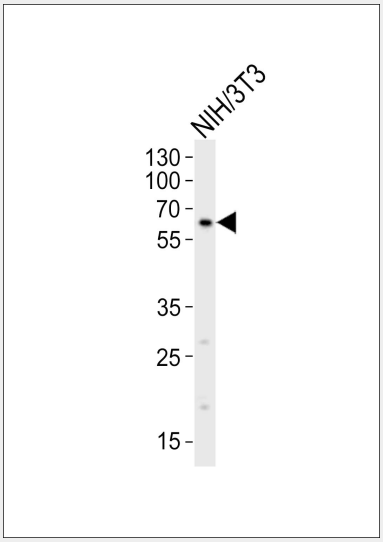
Western blot analysis of lysate from human ovary tissue lysate, using RYK Antibody (N175)(Cat. #AP7677a). AP7677a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.



Western blot analysis of lysate from human ovary tissue lysate, using RYK Antibody (N175)(Cat. #AP7677a). AP7677a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.



Western blot analysis of lysate from mouse NIH/3T3 cell line, using RYK Antibody (N175)(Cat. #AP7677a). AP7677a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

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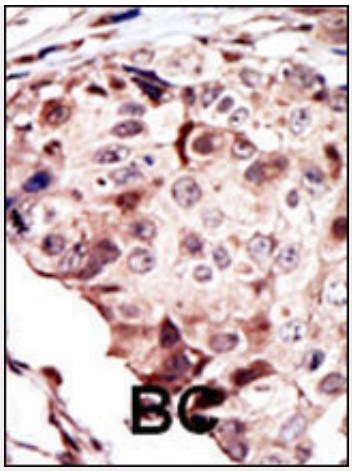
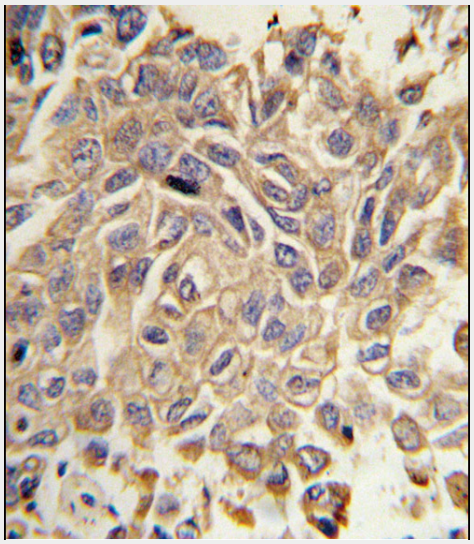


Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with RYK Antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

RYK Antibody - Background

RYK is an atypical member of the family of growth factor receptor protein tyrosine kinases, differing from other members at a number of conserved residues in the activation and nucleotide binding domains. This gene product belongs to a subfamily whose members do not appear to be regulated by phosphorylation in the activation segment. It has been suggested that mediation of biological activity by recruitment of a signaling-competent auxiliary protein may occur through an as yet uncharacterized mechanism. A nine nucleotide insertion in some transcripts results in the SLG variant. It is not established whether this is a product of alternative splicing or a second gene, since evidence for a second gene or pseudogene on chromosome 17 exists.

RYK Antibody - References

Trivier, E., et al., J. Biol. Chem. 277(25):23037-23043 (2002). Katso, R.M., et al., Mol. Cell. Biol. 19(9):6427-6440 (1999). Wang, X.C., et al., Mol. Med. 2(2):189-203 (1996). Tamagnone, L., et al.,

Oncogene 8(7):2009-2014 (1993). Stacker, S.A., et al., Oncogene 8(5):1347-1356 (1993).

RYK Antibody - Citations

- Non-Canonical WNT5A Signaling Through RYK Contributes to Aggressive Phenotype of the Rheumatoid Fibroblast-Like Synoviocytes
- Frizzled 1 and Wnt1 as new potential therapeutic targets in the traumatically injured spinal cord
- Wnt5a regulates hematopoietic stem cell proliferation and repopulation through the Ryk receptor.
- The Ryk receptor is expressed in glial and fibronectin-expressing cells after spinal cord injury.
- Noncanonical Wnt signaling promotes osteoclast differentiation and is facilitated by the human immunodeficiency virus protease inhibitor ritonavir.
- Wnt-Ryk signaling mediates axon growth inhibition and limits functional recovery after spinal cord injury.