10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RYK Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7677a

Product Information

Application	WB, IHC-P, E
Primary Accession	P34925
Other Accession	Q01887
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	67815
Antigen Region	160-190

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~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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.

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.

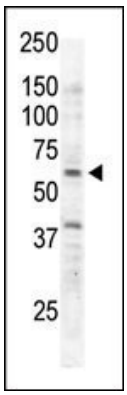
Background

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.

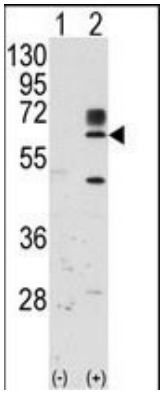
References

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).

Images

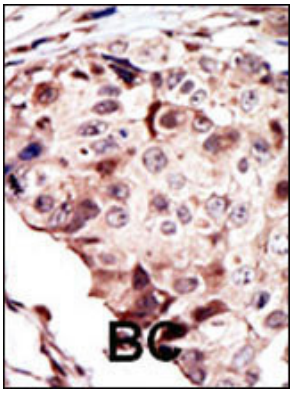


The anti-RYK Pab (Cat. #AP7677a) is used in Western blot to detect RYK in Jurkat cell lysate.

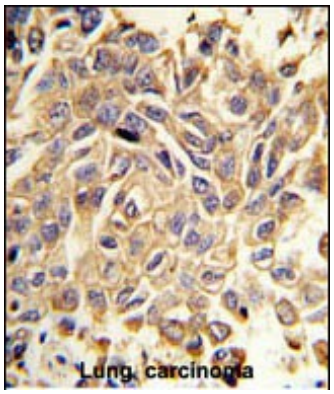


Western blot analysis of RYK (arrow) using rabbit polyclonal RYK Antibody (Cat. #AP7677a).293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the RYK gene (Lane 2) (Origene Technologies).

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.

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.