# RYK Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | RYK, Polyclonal Antibody |
| **Full Product Name** | RYK, CT (RYK, JTK5A, Tyrosine-protein kinase RYK) (MaxLight 750) |
| **Product Gene Name** | anti-RYK antibody |
| **Product Synonym Names** | RYK; JTK5A; Tyrosine-protein kinase RYK |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750. |
| **Purity/Purification** | Purified by Protein G Affinity Chromatography. |
| **Preparation and Storage** | Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight750 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap. |
| **Molecular Weight** | ~66 kDa |
| **Chromosome Location** | Chromosome: 3; NC_000003.11 (133875978..133969586, complement). Location: 3q22 |
| **OMIM** | 600524 |
| **3D Structure** | ModBase 3D Structure for P34925 |
| **Immunogen** | RYK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 569~599 amino acids from the C-terminal region of human RYK. |
| **Conjugate** | MaxLight750 |
| **Note** | Preservative Free |
| **Product Categories/Family for anti-RYK antibody** | Antibodies; Protein Kinases |
| **Applications Tested/Suitable for anti-RYK antibody** | Immunohistochemistry (IHC), FLISA, Western Blot (WB) |
| **Application Notes for anti-RYK antibody** | IHC: 1:50-100<br>FLISA: 1:1,000<br>WB: 1:100-500<br>Applications are based on unconjugated antibody. |
| **Related Product Information for anti-RYK antibody** | 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. |

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| **Product References and Citations for anti-RYK antibody** | 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). |
| **Other Notes** | Small volumes of anti-RYK antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for RYK purchase** | MBS6344599 is an antibody targeting RYK. Also known as RYK, CT (RYK, JTK5A, Tyrosine-protein kinase RYK) (MaxLight 750). Reactive in Human. Host: Rabbit. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RYK. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 116805325 |
| **NCBI GeneID** | 6259 |
| **NCBI Accession #** | NP_001005861.1 |
| **UniProt Primary Accession #** | P34925 |
| **UniProt Secondary Accession #** | Q04696 |
| **UniProt Related Accession #** | P34925 |
| **GenBank Nucleotide #** | NM_001005861 |
| **NCBI Official Full Name** | Homo sapiens receptor-like tyrosine kinase (RYK), transcript variant 1, mRNA |
| **NCBI Official Synonym Full Names** | receptor-like tyrosine kinase |
| **NCBI Official Symbol** | RYK |
| **NCBI Official Synonym Symbols** | JTK5; RYK1; JTK5A; D3S3195 |
| **UniProt Protein Name** | Tyrosine-protein kinase RYK |
| **Protein Family** | Tyrosine-protein kinase |
| **UniProt Gene Name** | RYK |
| **UniProt Synonym Gene Names** | JTK5A |
| **UniProt Entry Name** | RYK_HUMAN |
| **NCBI Protein Information** | tyrosine-protein kinase RYK; hydroxyaryl-protein kinase; JTK5A protein tyrosine kinase |
| **NCBI Summary for RYK** | The protein encoded by this gene 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. The encoded protein has a leucine-rich extracellular domain with a WIF-type Wnt binding region, a single transmembrane domain, and an intracellular tyrosine kinase domain. This protein is involved in stimulating Wnt signaling pathways such as the regulation of axon pathfinding. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Feb 2012] |

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| **UniProt Comments for RYK** | 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. Ref.5<br><br>Catalytic activity: ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate.<br><br>Subunit structure: Interacts with DVL1 (via PDZ domain). Ref.5<br><br>Subcellular location: Membrane; Single-pass type I membrane protein<br><br>By similarity. Nucleus<br><br>By similarity. Cytoplasm<br><br>By similarity. Note: In cells that have undergone neuronal differentiation, the C-terminal cleaved part is translocated from the cytoplasm to the nucleus<br><br>By similarity.<br><br>Tissue specificity: Observed in all the tissues examined.<br><br>Domain: The extracellular WIF domain is responsible for Wnt binding<br><br>By similarity.<br><br>Post-translational modification: Proteolytically cleaved, in part by presenilin, in response to WNT3 stimulation. Cleavage occurs during neuronal differentiation. Ref.6<br><br>Sequence similarities: Belongs to the protein kinase superfamily. Tyr protein kinase family.Contains 1 protein kinase domain.Contains 1 WIF domain.<br><br>Caution: According to some authors, has impaired kinase activity (Ref.4). |
| **Research Articles on RYK** | **1.** RYK and VANGL2 proteins form a complex, whereas RYK also activated RhoA, a downstream effector of PCP signaling. |
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