

Rabbit Polyclonal Anti-Phospho MERTK antibody

Catalog Number: PMKT-140AP

Lot Number:

General Information

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| Product | Phospho-MERTK Antibody |
| Description | Phosphorylated Tyrosine-protein kinase Mer precursor Antibody Affinity Purified |
| Accession # | Uniprot: P57097 NCBI: NP_075232.1 |
| Verified Applications | CM, ELISA, ICC, IF, IHC, FC, WB |
| Species Cross Reactivity | Human, Monkey, Mouse, Rat |
| Host | Rabbit |
| Immunogen | Phosphorylated synthetic peptide corresponding to unique amino acid sequence on MerTK protein. |
| Alternative Nomenclature | cMER antibody, Eyk antibody, MERK antibody, MERPEN antibody, MGC133349 antibody, nmf12 antibody, Nyk antibody, Receptor tyrosine kinase MerTK antibody, RP38 antibody, STK kinase antibody, Tyrosine-protein kinase Mer antibody |

Physical Properties

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|---|---|
| Quantity | 100 µg |
| Volume | 200 µl |
| Form | Affinity Purified Immunoglobulins |
| Immunoglobulin & Concentration | 0.63 mg/ml IgG in antibody stabilization buffer |
| Storage | Store at -20°C for long term storage. |

Recommended Dilutions

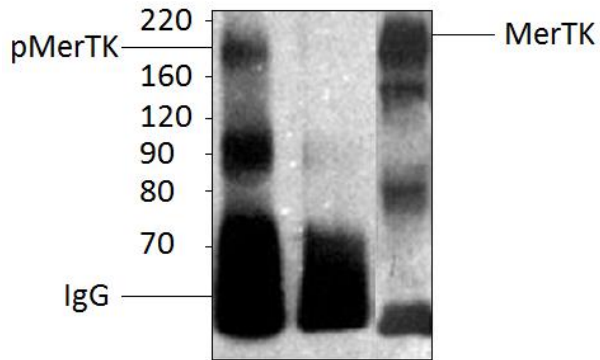
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|-----------------------------|----------|
| DOT Blot | 1:10,000 |
| ELISA | 1:10,000 |
| Immunocytochemistry | 1:250 |
| Immunofluorescence | 1:250 |
| Immunohistochemistry | 1:250 |
| Western Blot | 1:750 |

Related Products

Catalog

| | |
|--------------------------------------|-----------|
| FITC-Conjugated | PMKT-FITC |
| Antigenic Blocking Peptide | P-PMKT |
| Western Blot Positive Control | PC-PMKT |
| Non-Phospho MERTK | MKT-101AP |

Application Verification:



WB of PMKT-140AP. Phosphorylated (1) and non-phosphorylated (2,3) MerTK was immunoprecipitated with MKT-121AP and blotted with PMKT-140AP. MW of MERTK is 174 kDa. Lower broad band is IgG from immunoprecipitation.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

Tyrosine kinase activity is critical for transducing mitogenic signals inside the cells. Many of these tyrosine kinase proteins and receptors undergo auto-phosphorylation for the regulation of their activity (1, 2). Such auto phosphorylation takes place at multiple sites and results in to phosphorylation of cellular substrates. The Nyk receptor tyrosine kinase was identified by screening human glioma expression library with an anti-Phospho tyrosine antibody. The same kinase was also independently identified and cloned by Graham and coworkers and they referred it as Mer (3). Chicken homologues for this gene are also identified as c-eyk (4). The Nyk/Mertk/c-eyk are the newest members of the Ufo/Axl family of receptor tyrosine kinases which are characterized by the presence of NCAM-like extra-cellular regions with 2 IgG-like domains juxtaposed with 2 fibronectin III-like regions. It is been shown that MERTK/Nyk has a strong mitogenic and transforming potential by activating PI 3 kinase, PLCgamma, MAP-kinase pathways (5).

The auto-phosphorylation of MERTK was mapped on tripeptide containing amino acids 700-780. The three tyrosine residues lay in the tyrosine kinase domain between sub-domains VII and VIII (6). It has been shown that kinase activity correlates with auto phosphorylation of MERTK and that mutation of this tyrosine severely crippled the kinase activity (7). Auto phosphorylation of these regions appears to be a common mechanism for several tyrosine kinases, however, the subtle differences in the pattern of phosphorylation was noted in various other kinase systems. It is also notes that preferable substrate for auto phosphorylation in MERTK is the tyrosine 754 (7), substitution mutation to Phenylalanine exhibited a 90% decrease in auto phosphorylation of MERTK compared to wild type protein.

The receptor tyrosine kinase MERTK protein is approximately a 175-210 kDa protein. The MERTK protein has a tyrosine kinase domain closer to the C-terminal region and putative phosphorylation sites. The Anti-Phospho-MERTK-selective antibody was generated against phospho-tyrosine containing peptide from a conserved sequence near the C-terminal end that is unique to MERTK/Nyk protein only. Phospho-specific antibodies were isolated on immobilized phospho and non-phospho antigen affinity matrices. FabGennix also has fully characterized, epitope specific non-phospho-MERTK selective antibodies (MKT-101AP, MKT-112AP and MKT-121AP) in affinity-purified form for confocal, Western blotting and immuno cytochemical analysis. FITC-Conjugated antibodies are available, and antibodies can be conjugated to other fluorescent probes at an extra charge. Western blot positive controls for (PC-PMKT) are available in ready-to-use SDS sample buffer. Synthetic peptide (P-PMKT) is also available for immunodepletion/immunocompetition studies.

References:

1. Kazlauskas A. *Current Opin. Genet. Dev.* 1994; 4; 5-14.
2. Heldin C. H. *Cell* 1995; 80; 213-223.
3. Graham D. K., Dawson T. L., Mullaney D. L., et. al., *Cell Growth Diff.* 1994; 5; 647-657.
4. Jia R. and Manafusa H. *J. Biol. Chem.* 1994; 269; 1839-1844.
5. Ling L. and Kung H. J. *Mol. Cell Biol.* 1995; 15; 6582-6592.
6. Hanks S. K. and Quinn A. M. *Methods in Enzymology* 1992; 200; 38-62.
7. Ling L., Templeton D and Kung H. J. *J. Biol. Chem.* 1996; 271; 18355-18362.

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.
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