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#5611

## ALK (C26G7) Rabbit mAb (Sepharose<sup>®</sup> Bead Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> IP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 80 (NPM-ALK), 220 (ALK)	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q9UM73	<b>Entrez-Gene Id:</b> 238
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### Product Usage Information

#### Application

Immunoprecipitation

#### Dilution

1:20

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol. Store at -20°C. Do not aliquot the antibodies.

### Specificity/Sensitivity

ALK (C26G7) Rabbit mAb (Sepharose<sup>®</sup> Bead Conjugate) detects endogenous levels of total ALK protein. This antibody does not cross-react with other family members.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant fusion protein surrounding amino acid 1475 of human ALK.

### Description

This Cell Signaling Technology antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated Sepharose<sup>®</sup> beads. ALK (C26G7) Rabbit mAb (Sepharose<sup>®</sup> Bead Conjugate) is useful for immunoprecipitation assays. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated ALK (C26G7) Rabbit mAb #3333.

### Background

Anaplastic lymphoma kinase (ALK) is a tyrosine kinase receptor for pleiotrophin (PTN), a growth factor involved in embryonic brain development (1-3). In ALK-expressing cells, PTN induces phosphorylation of both ALK and the downstream effectors IRS-1, Shc, PLCγ, and PI3 kinase (1). ALK was originally discovered as a nucleophosmin (NPM)-ALK fusion protein produced by a translocation (4). Investigators have found that the NPM-ALK fusion protein is a constitutively active, oncogenic tyrosine kinase associated with anaplastic lymphoma (4). Research literature suggests that activation of PLCγ by NPM-ALK may be a crucial step for its mitogenic activity and involved in the pathogenesis of anaplastic lymphomas (5). A distinct ALK oncogenic fusion protein involving ALK and echinoderm microtubule-associated protein like 4 (EML4) has been described in the research literature from a non-small cell lung cancer (NSCLC) cell line, with corresponding fusion transcripts present in some cases of lung adenocarcinoma. The short, amino-terminal region of the microtubule-associated protein EML4 is fused to the kinase domain of ALK (6-8).

### Background References

1. Stoica, G.E. et al. (2001) *J Biol Chem* 276, 16772-9.
2. Iwahara, T. et al. (1997) *Oncogene* 14, 439-49.
3. Morris, S.W. et al. (1997) *Oncogene* 14, 2175-88.
4. Morris, S.W. et al. (1994) *Science* 263, 1281-4.
5. Bai, R.Y. et al. (1998) *Mol Cell Biol* 18, 6951-61.
6. Rikova, K. et al. (2007) *Cell* 131, 1190-203.
7. Takeuchi, K. et al. (2008) *Clin Cancer Res* 14, 6618-24.
8. Soda, M. et al. (2007) *Nature* 448, 561-6.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Applications Key

**IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** Human

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