

## Anti-Human ALK Mouse Monoclonal Antibody

Clone: 1A4 **REF** RU00001

### Intended use

Anti-human ALK Mouse Monoclonal Antibody is intended for research use only. Not for use in diagnostic procedures. Not for human or animal consumption.

### Background

ALK is a receptor tyrosine kinase, which belongs to the insulin receptor superfamily. It comprises an extracellular domain and hydrophobic stretch corresponding to a single pass transmembrane region, and an intracellular kinase domain. It plays an important role in the development of the brain and exerts its effects on specific neurons in the nervous system. Its gene has been found to be rearranged, mutated, or amplified in a series of tumors including anaplastic large cell lymphomas, neuroblastoma, and non-small cell lung cancer. The chromosomal rearrangements are the most common genetic alterations in this gene, which result in creation of multiple fusion genes in tumorigenesis, including ALK (chromosome 2)/EML4 (chromosome 2), ALK/RANBP2 (chromosome 2), ALK/ATIC (chromosome 2), ALK/TFG (chromosome 3), ALK/NPM1 (chromosome 5), ALK/SQSTM1 (chromosome 5), ALK/KIF5B (chromosome 10), ALK/CLTC (chromosome 17), ALK/TPM4 (chromosome 19), and ALK/MSN (chromosome X) [Provided by RefSeq, Jan 2011].

Alternative names: Anaplastic lymphoma kinase also known as ALK tyrosine kinase receptor or CD246

### Reagent provided

Anti-human ALK Mouse Monoclonal Antibody (Clone: 1A4) is provided in liquid form in 20mM Sodium phosphate, 150mM Sodium chloride, 0.09% Sodium azide, pH 7.4. The isotype of the antibody is IgG2b. The total protein concentration is 0.5 mg/mL.

For Immunohistochemistry the antibody may be used at a working dilution of 1:100 – 1:200 for formalin-fixed, paraffin-embedded human tissues, and this can be dependent upon the detection system used. These are guidelines only, and the optimal dilutions should be determined by the individual laboratory.

### Immunogen

Human recombinant protein fragment corresponding to amino acids 1300-1620 of human ALK (NP\_004295) was produced in *E.coli*.

### Specificity

The specificity of the anti-human ALK Mouse Monoclonal Antibody was established on known ALK positive and negative non-small cell carcinoma (NSCLC). The anti-ALK presented no staining on formalin fixed ALK negative NSCLC tissue and positive staining on formalin fixed ALK positive NSCLC tissue using immunohistochemical (IHC) test methods.

### Precautions

1. This product contains sodium azide ( $\text{NaN}_3$ ), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous,  $\text{NaN}_3$  may react with lead and copper plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent metal azide build-up in plumbing.
2. Wear appropriate Personal Protective Equipment to avoid contact with eyes and skin.
3. Unused reagents should be disposed of according to local, State, and Federal regulations.
4. Suitability for specific application may vary and it is the responsibility of the end user to determine the appropriate application for use and stability.

### Storage

Store at 2-8°C. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user.

### References

1. UK NEQAS ICC & ISH Immunocytochemistry Journal. Run 108 (January 2015)
2. Gruber, K., et al., A Novel, Highly Sensitive ALK Antibody 1A4 Facilitates Effective Screening for ALK Rearrangements in Lung Adenocarcinomas by Standard Immunohistochemistry. *J Thorac Oncol.* 2015 Apr;10(4):713-6.

**Your Antibody Partner – Innovating to a Healthier Tomorrow**

SDIX, LLC • 111 Pencader Drive • Newark, DE 19702 • 800-544-8881 • 302-456-6789 • www.sdix.com • Rev.01/22