SANTA CRUZ BIOTECHNOLOGY, INC.

ALK (F-12): sc-398791

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

LTK, ALK and Ros have been identified as receptor tyrosine kinases having sequence similarity to the Insulin receptor subfamily of kinases. LTK (leukocyte tyrosine kinase) is expressed in murine B lymphocyte precursors and has also been found in forebrain neurons. ALK (anaplastic lymphoma kinase) is normally highly expressed, specifically in the nervous system. A truncated form containing the catalytic domain of ALK is expressed as the result of a translocation occuring in many non-Hodgkin's lymphomas. The c-Ros gene was originally identified in mutant form as an oncogene. Ros is normally expressed in a small number of epithelial cell types and may play a role in epithelial development.

CHROMOSOMAL LOCATION

Genetic locus: ALK (human) mapping to 2p23.2; Alk (mouse) mapping to 17 E1.3.

SOURCE

ALK (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 117-145 within an N-terminal extracellular domain of ALK of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALK (F-12) is available conjugated to agarose (sc-398791 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398791 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398791 PE), fluorescein (sc-398791 FITC), Alexa Fluor® 488 (sc-398791 AF488), Alexa Fluor® 546 (sc-398791 AF546), Alexa Fluor® 594 (sc-398791 AF594) or Alexa Fluor® 647 (sc-398791 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398791 AF680) or Alexa Fluor® 790 (sc-398791 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398791 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ALK (F-12) is recommended for detection of ALK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ALK siRNA (h): sc-40083, ALK siRNA (m): sc-40084, ALK siRNA (r): sc-108078, ALK shRNA Plasmid (h): sc-40083-SH, ALK shRNA Plasmid (m): sc-40084-SH, ALK shRNA Plasmid (r): sc-108078-SH, ALK shRNA (h) Lentiviral Particles: sc-40083-V, ALK shRNA (m) Lentiviral Particles: sc-40084-V and ALK shRNA (r) Lentiviral Particles: sc-108078-V.

Molecular Weight of ALK precursor: 176 kDa.

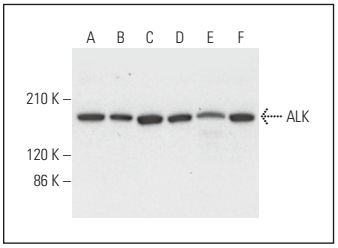
Molecular Weight of B23-ALK fusion protein: 80 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, U-937 cell lysate: sc-2239 or Raji whole cell lysate: sc-364236.

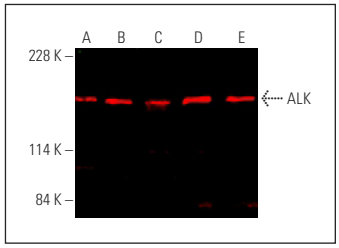
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



ALK (F-12): sc-398791. Western blot analysis of ALK expression in HuT 78 (**A**), U-937 (**B**), Raji (**C**), K-562 (**D**), MDA-MB-231 (**E**) and MDA-MB-435S (**F**) whole cell lysates.



ALK (F-12): sc-398791. Near-infrared western blot analysis of ALK expression in HuT 78 (**A**), Raji (**B**), K-562 (**C**), MDA-MB-231 (**D**) and Jurkat (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

1. Zeng, L., et al. 2017. ALK is a therapeutic target for lethal sepsis. Sci. Transl. Med. 9: eaan5689.
2. Byun, S., et al. 2018. Postprandial FGF19-induced phosphorylation by Src is critical for FXR function in bile acid homeostasis. Nat. Commun. 9: 2590.
3. Zhang, B., et al. 2018. ALK is required for NLRP3 inflammasome activation in macrophages. Biochem. Biophys. Res. Commun. 501: 246-252.
4. Huang, H., et al. 2021. Extracellular domain shedding of the ALK receptor mediates neuroblastoma cell migration. Cell Rep. 36: 109363.
5. O'Donohue, T.J., et al. 2021. Translational strategies for repotrectinib in neuroblastoma. Mol. Cancer Ther. 20: 2189-2197.
6. Yu, X., et al. 2022. MDK induces temozolomide resistance in glioblastoma by promoting cancer stem-like properties. Am. J. Cancer Res. 12: 4825-4839.
7. Wang, X., et al. 2023. ALK-JNK signaling promotes NLRP3 inflammasome activation and pyroptosis via NEK7 during *Streptococcus pneumoniae* infection. Mol. Immunol. 157: 78-90.
8. Pischedda, F., et al. 2023. Negr1-derived peptides trigger ALK degradation and Halt neuroblastoma progression *in vitro* and *in vivo*. Pharmaceutics 15: 2307.
9. Bartoloni, S., et al. 2024. Selective impact of ALK and MELK inhibition on ERα stability and cell proliferation in cell lines representing distinct molecular phenotypes of breast cancer. Sci. Rep. 14: 8200.
10. Liu, C., et al. 2024. Targeting ALK averts ribonuclease 1-induced immunosuppression and enhances antitumor immunity in hepatocellular carcinoma. Nat. Commun. 15: 1009.

RESEARCH USE

For research use only, not for use in diagnostic procedures.