Human LTK Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4664

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LTK in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LTK Ser10-Pro424 Accession # P29376
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

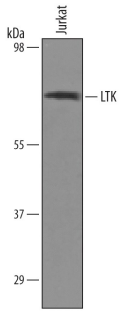
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	50 µg/mL	See Below

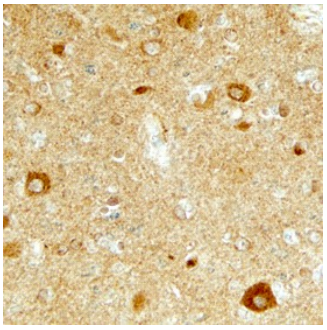
DATA

Western Blot



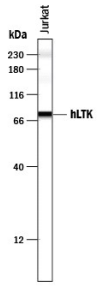
Detection of Human LTK by Western Blot. Western blot shows lysates of Jurkat human acute T cell leukemia cell line. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human LTK Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4664) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for LTK at approximately 70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunohistochemistry



LTK in Human Brain. LTK was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using Sheep Anti-Human LTK Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4664) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hemotoxylin (blue). Specific staining was localized to neurons. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Simple Western



Detection of Human LTK by Simple Western™. Simple Western lane view shows lysates of Jurkat human acute T cell leukemia cell line, loaded at 0.2 mg/mL. A specific band was detected for LTK at approximately 77 kDa (as indicated) using 50 µg/mL of Sheep Anti-Human LTK Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4664) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system. Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

LTK (Leukocyte tyrosine kinase; also protein tyrosine kinase 1) is a glycoprotein member of the tyrosine protein kinase family, insulin receptor subfamily of proteins. There are multiple isoforms that run between 50 and 100 kDa in SDS-Page. It is reportedly expressed in lymphocytes and cerebral cortex neurons, plus cardiomyocytes where it plays a role in cellular hypertrophy. Mature human LTK is an 848 amino acid (aa) type I transmembrane protein that is embedded in the ER. It contains a 408 aa extracellular domain (aa 17-424) plus a 415 aa cytoplasmic region (aa 450-864). The cytoplasmic region possesses multiple phosphotyrosines that interact with downstream signaling molecules. There is also a protein kinase domain between aa 510-786. LTK apparently undergoes dimer- and trimerization under certain circumstances. There are multiple splice variants for LTK. Two isoforms possess a common deletion of aa 274-334 that may be accompanied by a 27 aa substitution for aa 449-544. Another isoform shows an alternative start site at Met406 accompanied by a 17 aa substitution for Val449, while a fourth isoform contains a 51 aa substitution for aa 171-864. A final 50 kDa isoform shows a 28 aa substitution for aa 449-864. Over aa 17-424, human LTK shares 75% aa identity with mouse LTK.

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