**Human ALK-7 Antibody**

Monoclonal Mouse IgG2B Clone # 810506
Catalog Number: MAB77491

**DESCRIPTION**

**Species Reactivity** Human

**Specificity** Detects human ALK-7 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant rat ALK-7 is observed.

**Source** Monoclonal Mouse IgG2B Clone # 810506

**Purification** Protein A or G purified from hybridoma culture supernatant

**Immunogen** Chinese hamster ovary cell line CHO-derived recombinant human ALK-7 Leu26-Glu113
Accession # Q8NER5

**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.

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<th>Recommended Concentration</th>
<th>Sample</th>
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<td>2.5 μg/10⁶ cells</td>
<td>See Below</td>
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**CyTOF-ready**

Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.

**DATA**

**Flow Cytometry**

Detection of ALK-7 in PC-3 Human Cell Line by Flow Cytometry. PC-3 human prostate cancer cell line was stained with Mouse Anti-Human ALK-7 Monoclonal Antibody (Catalog # MAB77491, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).

**PREPARATION AND STORAGE**

**Reconstitution** Sterile PBS to a final concentration of 0.5 mg/mL.

**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.

**BACKGROUND**

Activin receptor-like kinase 7 (ALK-7), also known as Activin R1C (gene name ACVR1C), is a glycosylated 58 kDa type I receptor in the superfamily of TGF-β serine/threonine kinase receptors. It associates with type II receptors to form a signaling complex that responds to the ligands Activin AB, and Activin B, GDF3, and Nodal. ALK-7 plays a role in regulating energy balance by inhibiting insulin secretion and inducing pancreatic beta cell apoptosis. It is expressed in adipose tissue but downregulated in obesity. ALK-7 is also expressed in pituitary gonadotropic cells and in pre-eclamptic placenta. It induces the apoptosis of trophoblasts as well as ovarian granulosa and epithelial cells. Within the extracellular domain, human ALK-7 shares 95% and 91% amino acid (aa) sequence identity with mouse and rat ALK-7, respectively. Alternate splicing of human ALK-7 generates additional isoforms with either a 50 aa N-terminal truncation or with deletions of 79 aa or 157 aa that encompass the transmembrane segment.