10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Anti-ALK5 Antibody
**Mouse monoclonal antibody to ALK5**
**Catalog # AP61610**

## Specification

### Anti-ALK5 Antibody - Product Information

| | |
|---|---|
| Application | **IHC** |
| Primary Accession | P36897 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Calculated MW | **55960** |

### Anti-ALK5 Antibody - Additional Information

**Gene ID** 7046

**Other Names**
ALK5; SKR4; TGF-beta receptor type-1; TGFR-1; Activin A receptor type II-like protein kinase of 53kD; Activin receptor-like kinase 5; ALK-5; ALK5; Serine/threonine-protein kinase receptor R4; SKR4; TGF-beta type I receptor; Transforming growth factor-beta receptor type I; TGF-beta receptor type I; TbetaR-I

**Target/Specificity**
Recognizes endogenous levels of ALK5 protein.

**Format**
Mouse IgG2a. Liquid in PBS containing 50% glycerol, 0.2% BSA and 0.09% (W/V) sodium azide.

**Storage**
Store at -20 °C.Stable for 12 months from date of receipt

### Anti-ALK5 Antibody - Protein Information

**Name** TGFBR1

**Synonyms** ALK5, SKR4

**Function**
Transmembrane serine/threonine kinase forming with the TGF- beta type II serine/threonine kinase receptor, TGFBR2, the non- promiscuous receptor for the TGF-beta cytokines TGFB1, TGFB2 and TGFB3. Transduces the TGFB1, TGFB2 and TGFB3 signal from the cell surface to the cytoplasm and is thus regulating a plethora of physiological and pathological processes including cell cycle arrest in epithelial and hematopoietic cells, control of mesenchymal cell proliferation and differentiation, wound healing, extracellular matrix production, immunosuppression and carcinogenesis. The formation of the receptor complex composed of 2 TGFBR1 and 2 TGFBR2 molecules symmetrically bound to the cytokine dimer results in the phosphorylation and the activation of TGFBR1 by the constitutively active TGFBR2. Activated TGFBR1 phosphorylates SMAD2 which dissociates from the

receptor and interacts with SMAD4. The SMAD2-SMAD4 complex is subsequently translocated to the nucleus where it modulates the transcription of the TGF-beta-regulated genes. This constitutes the canonical SMAD-dependent TGF-beta signaling cascade. Also involved in non-canonical, SMAD-independent TGF-beta signaling pathways. For instance, TGFBR1 induces TRAF6 autoubiquitination which in turn results in MAP3K7 ubiquitination and activation to trigger apoptosis. Also regulates epithelial to mesenchymal transition through a SMAD-independent signaling pathway through PARD6A phosphorylation and activation.

**Cellular Location**
Cell membrane; Single-pass type I membrane protein. Cell junction, tight junction. Cell surface. Membrane raft

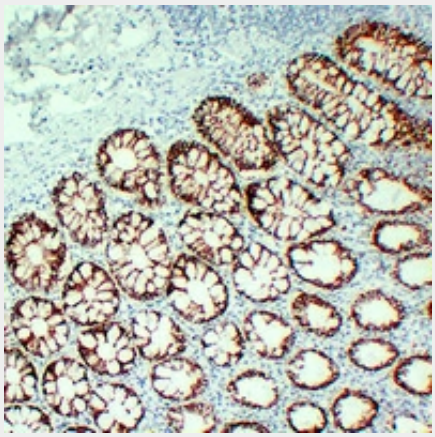
**Tissue Location**
Found in all tissues examined, most abundant in placenta and least abundant in brain and heart. Expressed in a variety of cancer cell lines (PubMed:25893292).

## Anti-ALK5 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Anti-ALK5 Antibody - Images



Immunohistochemical analysis of ALK5 staining in human colon formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

## Anti-ALK5 Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within human ALK5. The exact sequence is proprietary.