

**Emt (phospho Tyr512) Polyclonal Antibody**  
**Catalog # AP67936****Specification**

---

**Emt (phospho Tyr512) Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">Q08881</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal

**Emt (phospho Tyr512) Polyclonal Antibody - Additional Information****Gene ID** 3702**Other Names**

ITK; EMT; LYK; Tyrosine-protein kinase ITK/TSK; Interleukin-2-inducible T-cell kinase; IL-2-inducible T-cell kinase; Kinase EMT; T-cell-specific kinase; Tyrosine-protein kinase Lyk

**Dilution**

WB~~1:1000

IHC-P~~N/A

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**Emt (phospho Tyr512) Polyclonal Antibody - Protein Information****Name** ITK**Synonyms** EMT, LYK**Function**

Tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. When antigen presenting cells (APC) activate T-cell receptor (TCR), a series of phosphorylation lead to the recruitment of ITK to the cell membrane, in the vicinity of the stimulated TCR receptor, where it is phosphorylated by LCK. Phosphorylation leads to ITK autophosphorylation and full activation. Once activated, phosphorylates PLCG1, leading to the activation of this lipase and subsequent cleavage of its substrates. In turn, the endoplasmic reticulum releases calcium in the cytoplasm and the nuclear activator of activated T-cells (NFAT) translocates into the nucleus to perform its transcriptional duty. Phosphorylates 2 essential adapter proteins: the linker for activation of T-cells/LAT protein and LCP2. Then, a large number of signaling molecules such as VAV1 are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation (PubMed:<a

[12186560](http://www.uniprot.org/citations/12186560), PubMed: [12682224](http://www.uniprot.org/citations/12682224), PubMed: [21725281](http://www.uniprot.org/citations/21725281)). Required for TCR-mediated calcium response in gamma-delta T-cells, may also be involved in the modulation of the transcriptomic signature in the Vgamma2-positive subset of immature gamma-delta T-cells (By similarity). Phosphorylates TBX21 at 'Tyr-530' and mediates its interaction with GATA3 (By similarity).

#### Cellular Location

Cytoplasm. Nucleus {ECO:0000250|UniProtKB:Q03526}. Note=Localizes in the vicinity of cell surface receptors in the plasma membrane after receptor stimulation

#### Tissue Location

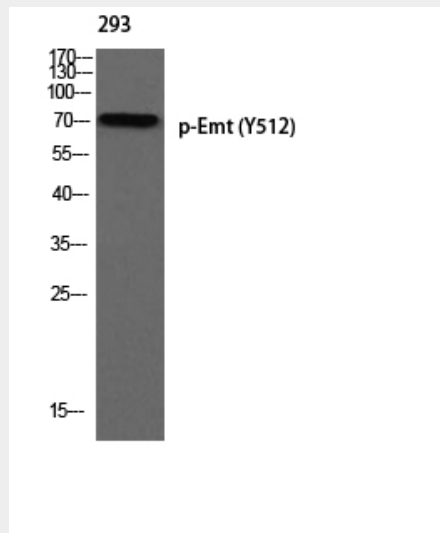
T-cell lines and natural killer cell lines.

### Emt (phospho Tyr512) Polyclonal Antibody - Protocols

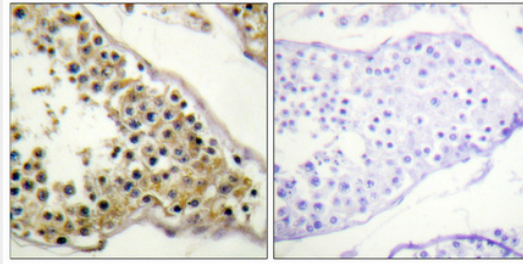
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Emt (phospho Tyr512) Polyclonal Antibody - Images



Western blot analysis of 293 using p-Emt (Y512) antibody.



Immunohistochemical analysis of paraffin-embedded Human testis. Antibody was diluted at 1:100(4°,overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.

#### **Emt (phospho Tyr512) Polyclonal Antibody - Background**

Tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. When antigen presenting cells (APC) activate T-cell receptor (TCR), a series of phosphorylation lead to the recruitment of ITK to the cell membrane, in the vicinity of the stimulated TCR receptor, where it is phosphorylated by LCK. Phosphorylation leads to ITK autophosphorylation and full activation. Once activated, phosphorylates PLCG1, leading to the activation of this lipase and subsequent cleavage of its substrates. In turn, the endoplasmic reticulum releases calcium in the cytoplasm and the nuclear activator of activated T-cells (NFAT) translocates into the nucleus to perform its transcriptional duty. Phosphorylates 2 essential adapter proteins: the linker for activation of T-cells/LAT protein and LCP2. Then, a large number of signaling molecules such as VAV1 are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation (PubMed:12186560, PubMed:12682224, PubMed:21725281). Phosphorylates TBX21 at 'Tyr-530' and mediates its interaction with GATA3 (By similarity).