

## Anti-STAT3 Antibody (4G321)

## Product Details

|               |                         |
|---------------|-------------------------|
| Ig Type:      | Rabbit IgG              |
| Reactivity:   | Human                   |
| Conjugation:  | Unconjugated            |
| Clone:        | 4G321                   |
| Purification: | Affinity-chromatography |

## Applications

|                    |   |
|--------------------|---|
| Verified Activity: | IHC image of TMAH-01139 diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB. |
| Application:       | ELISA, IHC  |
| Recommended        | IHC:1:50-1:200.   |

## Properties

|                      |   |
|----------------------|---|
| Stability & Storage: | Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. |
| Shipping:            | Shipping with blue ice.   |

## Antigen Details

|                  |   |
|------------------|---|
| Immunogen:       | A synthetic peptide: Human STAT3  |
| Antigen Species: | Human   |
| Gene ID:         | 6774  |
| Uniprot ID:      | P40763  |
| Synonyms:        | APRF;ADMIO;signal transducer and activator of transcription 3 (acute-phase response factor); HIES                 |
| Biology Area:    | Epigenetics and Nuclear Signaling, Cancer, Cardiovascular, Developmental biology, Signal transduction, Stem cells |

## Research Background

Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors. Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene. May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4. Upon activation of IL6ST/gp130 signaling by interleukin-6 (IL6), binds to the IL6-responsive elements identified in the promoters of various acute-phase protein genes. Activated by IL31 through IL31RA. Acts as a regulator of inflammatory response by regulating differentiation of naive CD4(+) T-cells into T-helper Th17 or regulatory T-cells (Treg): deacetylation and oxidation of lysine residues by LOXL3, leads to disrupt STAT3 dimerization and inhibit its transcription activity. Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase,

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such as CCND1. Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation. May play an apoptotic role by transactivating BIRC5 expression under LEP activation. Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity. Plays a crucial role in basal beta cell functions, such as regulation of insulin secretion.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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