

PRODUCT INFORMATION



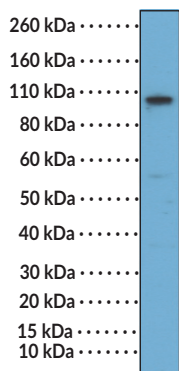
STAT6 Rabbit Monoclonal Antibody (Clone RM473)

Item No. 42838

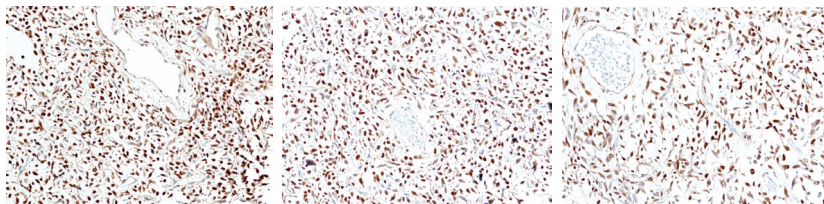
Overview and Properties

Contents:	This vial contains 100 µg of protein A affinity-purified monoclonal antibody
Synonyms:	IL-4 STAT, Signal Transducer and Activator of Transcription 6
Immunogen:	Peptide corresponding to residues near the C-terminus of human STAT6
Cross Reactivity:	(+) STAT6
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM473
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:1,000-1:2,500 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



WB of A431 cell lysate using STAT6 Rabbit Monoclonal Antibody (Clone RM473) at a dilution of 1:2,500.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human solitary fibrous tumor tissue sections using Cayman's STAT6 Rabbit Monoclonal Antibody (Clone RM473), at a dilution of 1:100.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

STAT6 is a transcription factor and member of the STAT protein family with roles in innate and adaptive immunity.^{1,2} It is composed of N-terminal, coiled-coil, DNA-binding, and linker domains that mediate nuclear translocation and export, as well as Src homology 2 (SH2) and C-terminal transactivation domains that are subject to phosphorylation.² Phosphorylation of STAT6 at tyrosine 641 (Tyr641) is mediated by JAKs in response to stimulation with cytokines or growth factors and induces STAT6 dimerization and nuclear translocation, leading to STAT6-dependent gene transcription.^{1,3} STAT6 is necessary for STING-induced immune responses to viral infection *in vitro* and *in vivo*.⁴ The levels of phosphorylated STAT6 are increased in thyroid epithelial cells isolated from patients with Grave's disease.⁵ Cayman's STAT6 Rabbit Monoclonal Antibody (Clone RM473) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Ott, N., Faletti, L., Heeg, M., *et al.* JAKs and STATs from a clinical perspective: Loss-of-function mutations, gain-of-function mutations, and their multidimensional consequences. *J. Clin. Immunol.* **43**(6), 1326-1359 (2023).
2. Miklosy, G., Hilliard, T.S., and Turkson, J. Therapeutic modulators of STAT signalling for human diseases. *Nat. Rev. Drug Discov.* **12**(8), 611-629 (2013).
3. Imada, K. and Leonard, W.J. The Jak-STAT pathway. *Mol. Immunol.* **37**(1-2), 1-11 (2000).
4. Cioffier, B., Lepage, E., Briere, J., *et al.* Chop chemotherapy plus rituximab compared with chop alone in elderly patients with diffuse large-B-cell lymphoma. *N. Engl. J. Med.* **346**, 235-242 (2002).
5. Jiang, X., Zha, B., Liu, X., *et al.* STAT6 deficiency ameliorates Graves' disease severity by suppressing thyroid epithelial cell hyperplasia. *Cell Death Dis.* **7**(12), e2506 (2016).

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