

PRODUCT INFORMATION

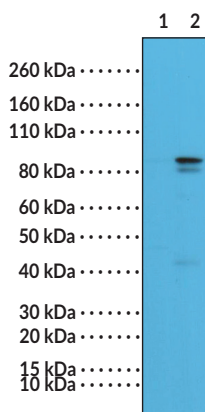
STAT3 α/β (Phospho-Tyr⁷⁰⁵) Rabbit Monoclonal Antibody (Clone RM261)

Item No. 32212

Overview and Properties

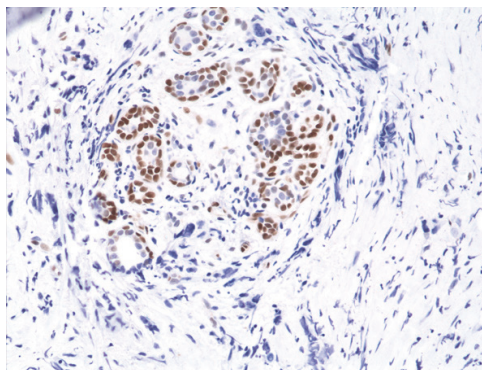
Contents:	This vial contains 100 μ l of protein A-affinity purified monoclonal antibody.
Synonym:	Signal Transducer and Activator of Transcription 3
Immunogen:	Peptide corresponding to human STAT3 α/β (phospho-Tyr ⁷⁰⁵)
Cross Reactivity:	(+) STAT3 α (phospho-Tyr ⁷⁰⁵), STAT3 β (phospho-Tyr ⁷⁰⁵); (-) STAT3 without phosphorylation at Tyr ⁷⁰⁵
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	\geq 1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM261
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:1,000-1:10,000 and 1:1,000-1:2,000 for IHC and WB, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: A431 cell lysates untreated
Lane 2: A431 cell lysates treated

WB of A431 cell lysates treated with EGF or left untreated using STAT3 α/β (Phospho-Tyr⁷⁰⁵) Rabbit Monoclonal Antibody (Clone RM261) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human breast cancer tissue using STAT3 α/β (Phospho-Tyr⁷⁰⁵) Rabbit Monoclonal Antibody (Clone RM261) at a dilution of 1:10,000.

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.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

STAT3 is a ubiquitously expressed transcription factor and member of the STAT protein family that has roles in a variety of cellular functions including proliferation, apoptosis, and differentiation, as well as innate and adaptive immunity and stem cell pluripotency.¹⁻³ It contains 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.^{4,5} Alternative splicing of STAT3 pre-mRNA leads to the formation of the full-length isoform STAT3 α , as well as STAT3 β , a truncated isoform that lacks a portion of the transactivation domain and is considered a dominant-negative regulator of STAT3 transcriptional activation.⁶ STAT3 signaling is inhibited by the negative regulator suppressor of cytokine signaling 3 (SOCS-3) and prevents excessive STAT3 activation.² Phosphorylation of STAT3 at tyrosine 705 (Tyr⁷⁰⁵) is mediated by JAKs in response to stimulation with cytokines or growth factors and induces STAT3 dimerization and nuclear translocation, leading to STAT3-dependent gene transcription.^{1,2} Tumor STAT3 (phospho-Tyr⁷⁰⁵) levels are increased in patients with squamous or renal cell carcinoma and are associated with metastasis.^{7,8} Cayman's STAT3 α/β (Phospho-Tyr⁷⁰⁵) Rabbit Monoclonal Antibody (Clone RM261) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

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