

Stat3 (D3Z2G) Rabbit mAb

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP, IF-IC, FC-FP, ChIP, ChIP-seq	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 79, 86	Source/Isotype: Rabbit IgG	UniProt ID: #P40763	Entrez-Gene Id: 6774
--	--------------------------------	-----------------------------------	----------------------------	--------------------------------------	-------------------------------	--------------------------------

Product Usage Information

For optimal ChIP and ChIP-seq results, use 10 µl of antibody and 10 µg of chromatin (approximately 4 x 10⁶ cells) per IP. This antibody has been validated using SimpleChIP[®] Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (Immunocytochemistry)	1:1000
Flow Cytometry (Fixed/Permeabilized)	1:400 - 1:1600
Chromatin IP	1:50
Chromatin IP-seq	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #91276.

Specificity/Sensitivity

Stat3 (D3Z2G) Rabbit mAb recognizes endogenous levels of total Stat3 protein. Species cross-reactivity for IF-IC and F is human only.

Species predicted to react based on 100% sequence homology

Bovine, Pig

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly700 of human Stat3 protein.

Background

The Stat3 transcription factor is an important signaling molecule for many cytokines and growth factor receptors (1) and is required for murine fetal development (2). Research studies have shown that Stat3 is constitutively activated in a number of human tumors (3,4) and possesses oncogenic potential (5) and anti-apoptotic activities (3). Stat3 is activated by phosphorylation at Tyr705, which induces dimerization, nuclear translocation, and DNA binding (6,7). Transcriptional activation seems to be regulated by phosphorylation at Ser727 through the MAPK or mTOR pathways (8,9). Stat3 isoform expression appears to reflect biological function as the relative expression levels of Stat3α (86 kDa) and Stat3β (79 kDa) depend on cell type, ligand exposure, or cell maturation stage (10). It is notable that Stat3β lacks the serine phosphorylation site within the carboxy-terminal transcriptional activation domain (8).

Background References

1. Heim, M.H. (2001) *J Recept Signal Transduct Res* 19, 75-120.
2. Takeda, K. et al. (1997) *Proc Natl Acad Sci U S A* 94, 3801-4.
3. Catlett-Falcone, R. et al. (1999) *Immunity* 10, 105-15.
4. Garcia, R. and Jove, R. (1998) *J Biomed Sci* 5, 79-85.
5. Bromberg, J.F. et al. (1999) *Cell* 98, 295-303.
6. Darnell, J.E. et al. (1994) *Science* 264, 1415-21.
7. Ihle, J.N. (1995) *Nature* 377, 591-4.
8. Wen, Z. et al. (1995) *Cell* 82, 241-50.
9. Yokogami, K. et al. (2000) *Curr Biol* 10, 47-50.
10. Biethahn, S. et al. (1999) *Exp Hematol* 27, 885-94.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-
FP:** Flow Cytometry (Fixed/Permeabilized) **ChIP:** Chromatin IP **ChIP-seq:** Chromatin IP-seq

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

Alexa Fluor is a registered trademark of Life Technologies Corporation.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.