

Stat2 (D9J7L) Rabbit mAb

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

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|--|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W, IP, IF-IC, FC-FP, ChIP, ChIP-seq, C&R | H M R | Endogenous | 97, 113 | Rabbit IgG | #P52630 | 6773 |

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.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

| Application | Dilution |
|--|---------------|
| Western Blotting | 1:1000 |
| Immunoprecipitation | 1:50 |
| Immunofluorescence (Immunocytochemistry) | 1:100 - 1:400 |
| Flow Cytometry (Fixed/Permeabilized) | 1:50 - 1:200 |
| Chromatin IP | 1:50 |
| Chromatin IP-seq | 1:50 |
| CUT&RUN | 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 #19413.

Specificity/Sensitivity

Stat2 (D9J7L) Rabbit mAb recognizes endogenous levels of total Stat2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu706 of human Stat2 protein.

Background

Stat2 (113 kDa), originally purified from the nuclei of alpha-interferon-treated cells, is critical to the transcriptional responses induced by type I interferons, IFN-alpha/beta (1,2). Knockout mice with a targeted disruption of Stat2 have higher susceptibility to viral infection and altered responses to type I interferons (3). Stat2 is rapidly activated by phosphorylation at Tyr690 in response to stimulation by IFN-alpha/beta via associations with receptor-bound Jak kinases (4). Unlike other Stat proteins, Stat2 does not form homodimers. Instead, activated Stat2 forms a heterodimer with Stat1 and translocates to the nucleus. There, it associates with the DNA-binding protein p48 and forms the transcriptional activator complex, interferon-stimulated gene factor 3 (ISGF3), promoting transcription from the ISRE (5).

Background References

1. Fu, X.Y. et al. (1992) *Proc Natl Acad Sci U S A* 89, 7840-3.
2. Ihle, J.N. (2001) *Curr Opin Cell Biol* 13, 211-7.
3. Park, C. et al. (2000) *Immunity* 13, 795-804.
4. Improtta, T. et al. (1994) *Proc Natl Acad Sci U S A* 91, 4776-80.
5. Horvath, C.M. et al. (1996) *Mol Cell Biol* 16, 6957-64.

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 nonfat dry milk, 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 **C&R:** CUT&RUN

Cross-Reactivity Key

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

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