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#8731

## CISH (D4D9) Rabbit mAb

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

<b>Applications:</b> W, IP, FC-FP	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 32, 37	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q9NSE2	<b>Entrez-Gene Id:</b> 1154
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Flow Cytometry (Fixed/Permeabilized)

#### Dilution

1:1000  
1:100  
1:50 - 1:200

### 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 #39434.

### Specificity/Sensitivity

CISH (D4D9) Rabbit mAb recognizes endogenous levels of total CISH protein.

### Species predicted to react based on 100% sequence homology

Monkey

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro176 of human CISH protein.

### Background

The suppressor of cytokine signaling (SOCS) family members are negative regulators of cytokine signal transduction that inhibit the Jak/Stat pathway (1-3). The SOCS family consists of at least 8 members including the originally identified cytokine-inducible SH2-containing protein (CIS1), as well as SOCS1-7. Each SOCS family member contains a central SH2 domain and a conserved carboxy-terminal motif designated as the SOCS box. These proteins are important regulators of cytokine signaling, proliferation, differentiation, and immune responses.

CISH/CIS1, the first described member of the SOCS family, is induced by a number of cytokines including IL-2, IL-3, GM-CSF, and EPO (4). The CISH protein appears as a doublet around 32 and 37 kDa, the nature of which is unknown (4). CISH binds to phosphorylated cytokine receptors and can inhibit Stat5 activity (4-6). Expression of CISH is regulated by Stat5, thereby providing feedback modulation (5). Transgenic mice overexpressing CISH display phenotypes similar to Stat5 knockouts, including defects in mammary gland development and in T and NK cell regulation (6). Research studies have shown that polymorphisms within the CISH gene are associated with susceptibility to infectious diseases (7).

### Background References

- Alexander, W.S. et al. (1999) *J Leukoc Biol* 66, 588-92.
- Chen, X.P. et al. (2000) *Immunity* 13, 287-90.
- Hilton, D.J. et al. (1998) *Proc Natl Acad Sci USA* 95, 114-9.
- Yoshimura, A. et al. (1995) *EMBO J* 14, 2816-26.
- Matsumoto, A. et al. (1997) *Blood* 89, 3148-54.
- Matsumoto, A. et al. (1999) *Mol Cell Biol* 19, 6396-407.
- Khor, C.C. et al. (2010) *N Engl J Med* 362, 2092-101.

### 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 **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

### Cross-Reactivity Key

**H:** Human **M:** Mouse

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