Revision 3

#8731 Store at -20C

CISH (D4D9) Rabbit mAb

Cell Signaling TECHNOLOGY®

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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:
WB, IP, FC-FP	H M	Endogenous	32, 37	Rabbit IgG	#Q9NSE2	1154

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100
Flow Cytometry (Fixed/Permeabilized)	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 #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

1. Alexander, W.S. et al. (1999) *J Leukoc Biol* 66, 588-92.
2. Chen, X.P. et al. (2000) *Immunity* 13, 287-90.
3. Hilton, D.J. et al. (1998) *Proc Natl Acad Sci USA* 95, 114-9.
4. Yoshimura, A. et al. (1995) *EMBO J* 14, 2816-26.
5. Matsumoto, A. et al. (1997) *Blood* 89, 3148-54.
6. Matsumoto, A. et al. (1999) *Mol Cell Biol* 19, 6396-407.
7. 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

WB: Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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Limited Uses