

Store at
-20C
#68790**Phospho-Tyk2 (Tyr1054/1055) (D7T8A)
Rabbit mAb****Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 134	Source/Isotype: Rabbit IgG	UniProt ID: #P29597	Entrez-Gene Id: 7297
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**Product Usage
Information****Application**

Western Blotting

Dilution

1:1000

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.

Specificity/Sensitivity

Phospho-Tyk2 (Tyr1054/1055) (D7T8A) Rabbit mAb recognizes endogenous levels of Tyk2 protein only when phosphorylated at Tyr1054 and Tyr1055. Cross-reactivity was not observed with other Jak family members.

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

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phospho-peptide corresponding to residues surrounding Tyr1054/1055 of human Tyk2 protein.

Background

Tyk2 is a member of the Jak family of protein tyrosine kinases. It associates with and is activated by receptors for many cytokines including IL-13, the IL-6 family, IL-10, and IFN- α and β (1-3). Following ligand binding, Tyk2 is activated by phosphorylation of Tyr1054 and/or Tyr1055 (4). Tyk2 is required for the tyrosine phosphorylation of Stat3 in the IFN- β signaling cascade (5). The role of Tyk2 has been extensively studied in terms of its involvement in immune regulation and pathological significance (reviewed in 6). Deletion of Tyk2 in mice results in increased sensitivity to infection and defective tumor surveillance, but only a partial effect on Type I interferon signaling (7, 8). In contrast, a human patient diagnosed with hyper-IgE syndrome having increased susceptibility to various microorganisms was found to have a homozygous mutation of Tyk2 (9). These studies suggest a more critical role of Tyk2 in humans with regards to Type I interferon signaling as well as other cytokines including IL-23, IL-6, and IL-10.

Background References

1. Velazquez, L. et al. (1995) *J. Biol. Chem.* 270, 3327-34.
2. Stahl, N. et al. (1994) *Science* 263, 92-5.
3. Leonard, W.J. (1998) *Annu. Rev. Immunol.* 16, 293-322.
4. Gauzzi, M.C. et al. (1996) *J Biol Chem* 271, 20494-500.
5. Rani, M.R. et al. (1999) *J. Biol. Chem.* 274, 32507-11.
6. Strobl, B. et al. (2011) *Front Biosci (Landmark Ed)* 16, 3214-32.
7. Karaghiosoff, M. et al. (2000) *Immunity* 13, 549-60.
8. Shimoda, K. et al. (2000) *Immunity* 13, 561-71.
9. Minegishi, Y. et al. (2006) *Immunity* 25, 745-55.

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**Cross-Reactivity Key****H:** Human**Trademarks and Patents**

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