

#4101 Store at -20C

CDK8 (G398) Antibody



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:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M Mk	Endogenous	53	Rabbit	#P49336	1024

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 and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

CDK8 (G398) Antibody detects endogenous levels of total CDK8 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly398 of human CDK8. Antibodies are purified using protein A and peptide affinity chromatography.

Background

The mammalian Mediator Complex is a multi-subunit protein complex that couples specific transcriptional regulators to RNA polymerase II (Pol II) and the basal transcription machinery. Interactions between distinct Mediator subunits and transcription factors allow for specific gene regulation (reviewed in 1). Mediator complex interactions control various biological processes, including insulin signaling (2), NF-κB-dependent signaling (3), stem cell pluripotency and self renewal (4,5), and proliferation of colon cancer cells (6,7).

CDK8/Cyclin C, along with Med12 and Med13, constitute a subcomplex within the Mediator Complex thought to act as a molecular switch, inhibiting Pol II recruitment and transcription initiation (8,9). Expression of CDK8 abrogates E2F-1-dependent inhibition of β-catenin activity in colon cancer cells (9). High levels of CDK8 coincide with high β-catenin-dependent transcription in colon cancer cells, and their proliferation can be inhibited by suppressing CDK8 expression (8). CDK8 can phosphorylate Ser727 on STAT1, which reduces natural killer (NK) cell toxicity (10,11). As such, inhibitors are being pursued as potential therapeutics to enhance NK cell activity and combat a variety of cancer types (12,13).

Background References

1. Malik, S. and Roeder, R.G. (2005) *Trends Biochem Sci* 30, 256-63.
2. Wang, W. et al. (2009) *Dev Cell* 16, 764-71.
3. van Essen, D. et al. (2009) *PLoS Biol* 7, e73.
4. Tutter, A.V. et al. (2009) *J Biol Chem* 284, 3709-18.
5. Varelas, X. et al. (2008) *Nat Cell Biol* 10, 837-48.
6. Firestein, R. et al. (2008) *Nature* 455, 547-51.
7. Morris, E.J. et al. (2008) *Nature* 455, 552-6.
8. Knuesel, M.T. et al. (2009) *Mol Cell Biol* 29, 650-61.
9. Knuesel, M.T. et al. (2009) *Genes Dev* 23, 439-51.
10. Bancerek, J. et al. (2013) *Immunity* 38, 250-62.
11. Putz, E.M. et al. (2013) *Cell Rep* 4, 437-44.
12. Dale, T. et al. (2015) *Nat Chem Biol* 11, 973-80.
13. Rzymiski, T. et al. (2017) *Oncotarget* , .

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

WB: Western Blotting

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

Trademarks and Patents

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

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.