Revision 4

Store at -20C

#12494

CENP-T Antibody

Cell Signaling TECHNOLOGY®

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/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M Mk	Endogenous	65	Rabbit	#Q96BT3	80152

Product Usage Information

Application	Dilution
Western Blotting	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

CENP-T Antibody recognizes endogenous levels of total CENP-T protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CENP-T protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Modulation of chromatin structure plays a critical role in the regulation of transcription and replication of the eukaryotic genome. The nucleosome, made up of four core histone proteins (H2A, H2B, H3, and H4), is the primary building block of chromatin. In addition to the growing number of post-translational histone modifications regulating chromatin structure, cells can also exchange canonical histones with variant histones that can directly or indirectly modulate chromatin structure (1). CENP-A, also known as the chromatin-associated protein CSE4 (capping-enzyme suppressor 4-p), is an essential histone H3 variant that replaces canonical histone H3 in centromeric heterochromatin (2). The greatest divergence between CENP-A and canonical histone H3 occurs in the amino-terminal tail of the protein, which binds linker DNA between nucleosomes and facilitates proper folding of centromeric heterochromatin (3). The amino-terminal tail of CENP-A is also required for recruitment of other centromeric proteins (CENP-C, hSMC1, hZW10), proper kinetochore assembly, and chromosome segregation during mitosis (4).

CENP-A is regarded as the epigenetic mark of the centromere that persists through cell generations (5). Although its presence is necessary, it is not sufficient for formation of functional kinetochores (6). CENP-T, in complex with CENP-W, has recently been shown to form a histone fold, a structure that is capable of association with DNA, and target DNA to the kinetochore (7). Kinetochore attachment is mediated by a long flexible N-terminal region that has been shown to interact with outer proteins of the kinetochore complex (reviewed in 8). Moreover, the CENP-T-W complex has also been shown to interact with the CENP-S-X dimer, to form a heterotetrameric complex that has structural and potentially functional similarity to canonical histones (8). Since CENP-S-X are conserved kinetochore localized proteins, this new complex has been suggested to be a novel centromeric histone.

Background References

1. Jin, J. et al. (2005) *Trends Biochem Sci* 30, 680-7.
2. Ausió, J. (2006) *Brief Funct Genomic Proteomic* 5, 228-43.
3. Heit, R. et al. (2006) *Biochem Cell Biol* 84, 605-18.
4. Van Hooser, A.A. et al. (2001) *J Cell Sci* 114, 3529-42.
5. Jansen, L.E. et al. (2007) *J Cell Biol* 176, 795-805.
6. Gascoigne, K.E. et al. (2011) *Cell* 145, 410-22.
7. Hori, T. et al. (2008) *Cell* 135, 1039-52.
8. Nishino, T. et al. (2012) *Cell* 148, 487-501.

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 **M:** Mouse **Mk:** Monkey

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.