# Product Datasheet

## Chk1 Antibody - BSA Free

## NB100-464

Unit Size: 100 ul

Store at 4C. Do not freeze.

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**Publications: 12**

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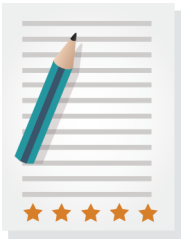


# NB100-464

Chk1 Antibody - BSA Free

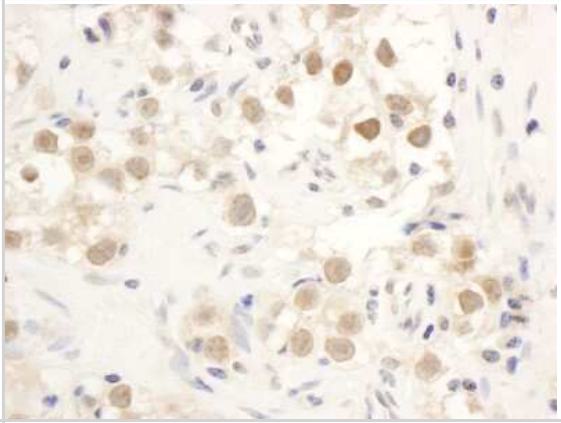
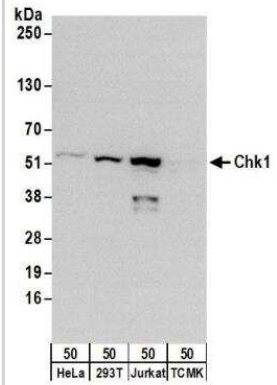
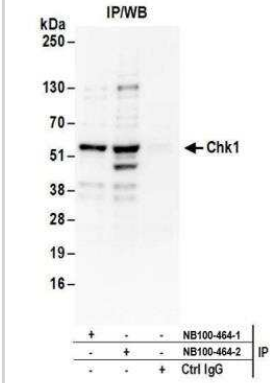
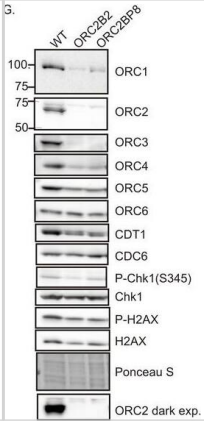
| Product Information | |
|---|---|
| **Unit Size** | 100 ul |
| **Concentration** | 1.0 mg/ml |
| **Storage** | Store at 4C. Do not freeze. |
| **Clonality** | Polyclonal |
| **Preservative** | 0.09% Sodium Azide |
| **Isotype** | IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Tris-Citrate/Phosphate (pH 7.0 - 8.0) |
| **Target Molecular Weight** | 54 kDa |

| Product Description | |
|---|---|
| **Description** | This antibody can be used as the primary antibody in a PLA assay with the following as complementing antibodies: NB100-305, NB100-322, NB100-97831 |
| **Host** | Rabbit |
| **Gene ID** | 1111 |
| **Gene Symbol** | CHEK1 |
| **Species** | Human, Mouse |
| **Reactivity Notes** | Mouse reactivity reported in scientific literature (PMID: 29287241). |
| **Immunogen** | The immunogen recognized by this antibody maps to a region between residues 250 and 300 of human Checkpoint Kinase 1 using the numbering given in SwissProt entry O14757 (GeneID 1111). |
| **Notes** | This antibody can be used as the primary antibody in a PLA assay with the following as complementing antibodies: NB100-305, NB100-322, NB100-97831 |

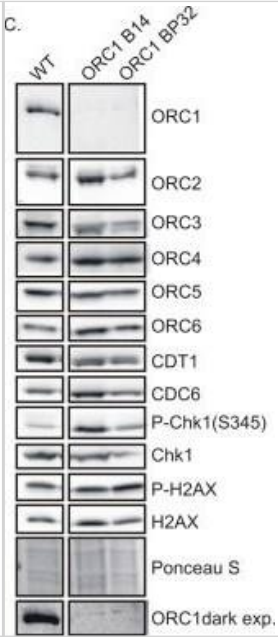
| Product Application Details | |
|---|---|
| **Applications** | Western Blot, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation |
| **Recommended Dilutions** | Western Blot 1:10000-1:25000, Immunohistochemistry 1:1000-1:5000, Immunoprecipitation 2-10 ug/mg lysate, Immunohistochemistry-Paraffin 1:1000-1:5000 |
| **Application Notes** | Epitope retrieval with Tris-EDTA pH 9.0 is recommended for FFPE tissue sections. |

## Images

Western Blot: Chk1 Antibody [NB100-464] - Knockout of ORC2 in HCT116 p53-/- cells. Western blot of ORC2 in HBEC and 293T cell lines. Ponceau S staining of total protein or immunoblot of Chk1 show equal loading of the pairs of lanes. Image collected and cropped by CiteAb from the following publication (https://elifesciences.org/articles/19084), licensed under a CC-BY license.

| | |
|---|---|
| Immunohistochemistry-Paraffin: Chk1 Antibody [NB100-464] - Section of human breast carcinoma. Antibody: Affinity purified rabbit anti-CHK1 used at a dilution of 1:1,000 (1ug/ml). Detection: DAB |  |
| Western Blot: Chk1 Antibody [NB100-464] - Detection of Human Chk1 by Western Blot. Samples: Whole cell lysate (50 ug) from HeLa, 293T, Jurkat, and mouse TMCK cells. Antibodies: Affinity purified rabbit anti-Chk1 antibody NB100-464 used for WB at 0.4 ug/ml. Detection: Chemiluminescence with an exposure time of 30 seconds. |  |
| Immunoprecipitation: Chk1 Antibody [NB100-464] - Detection of human Chk1 by western blot of immunoprecipitates. Samples: Whole cell lysate (1 mg for IP; 20% of IP loaded) from HeLa cells. Antibodies: Affinity purified rabbit anti-Chk1 antibody NB100-464 (lot 2) used for IP at 6 ug/mg lysate. Chk1 was also immunoprecipitated by a previous lot (lot 1) of this antibody. For blotting immunoprecipitated Chk1, NB100-464 (lot 2) was used at 1 ug/ml. Detection: Chemiluminescence with an exposure time of 30 seconds. |  |
| Western Blot: Chk1 Antibody [NB100-464] - Knockout of ORC2 in HCT116 p53-/- cells.(G) WB for indicated proteins in clones indicated on the top. Darker exposure of ORC2 blots is shown at the bottom. Ponceau S stains all proteins on the blot & also indicates equal loading of lanes. Image collected & cropped by CiteAb from the following publication (https://elifesciences.org/articles/19084), licensed under a CC-BY license. Not internally tested by Novus Biologicals. |  |

Western Blot: Chk1 Antibody [NB100-464] - Knockout of ORC1 in HCT116 p53-/- cells.(A) Strategy for insertion of a blasticidin gene & poly A site after first methionine of ORC1 in the second exon. (B) PCR on genomic DNA of indicated clones. WT: HCT116 p53-/- & ORC1+/+. ORC1 Knockout clones, B14, B48 & BP32 have an insert on both alleles of ORC1 as indicated by the absence of 0.6 kb PCR product. (C) Western blot for indicated proteins in clones indicated on the top. Darker exposure of the ORC1 blots is shown at the bottom. Ponceau S stains all proteins on the blot & also indicates equal loading of lanes. (D) Immunoblot of soluble & chromatin-associated proteins in the clones indicated at the top. For each panel, all the lanes are from the same blot & exposure. (E) Input cell lysate & immunoprecipitates of ORC1 immunoblotted for ORC1. Darker exposure of the top blots is shown in the middle. Tubulin in the cell lysate or the IgG band in the immunoprecipitate serves as loading control.DOI:http://dx.doi.org/10.7554/eLife.19084.005 Image collected & cropped by CiteAb from the following publication (https://elifesciences.org/articles/19084), licensed under a CC-BY license. Not internally tested by Novus Biologicals.




## Publications


Shibata, E & Dutta, A. A human cancer cell line initiates DNA replication normally in the absence of ORC5 and ORC2 proteins. J Biol Chem 2020-12-11 [PMID: 33453950] (IF/IHC, Human)

Shibata E, Dutta A A human cancer cell line initiates DNA replication normally in the absence of ORC5 and ORC2 proteins The Journal of biological chemistry 2020-12-11 [PMID: 32989049] (WB, Human)

Morris BB, Wages NA, Grant PA, et al. MYBL2-Driven Transcriptional Programs Link Replication Stress and Error-prone DNA Repair With Genomic Instability in Lung Adenocarcinoma Frontiers in oncology 2020-01-08 [PMID: 33489883] (WB, Human)

Lee KY, Dutta A Chk1 promotes non-homologous end joining in G1 through direct phosphorylation of ASF1A Cell reports 2021-01-26 [PMID: 33503415] (IP, Human)

Yun H, Shi R, Yang Q et al. Over expression of hRad9 protein correlates with reduced chemosensitivity in breast cancer with administration of neoadjuvant chemotherapy Sci Rep. 2014-12-17 [PMID: 25520248] (IF/IHC, Human)

Shibata E, Kiran M, Shibata Y et al. Two subunits of human ORC are dispensable for DNA replication and proliferation Elife. 2016-11-30 [PMID: 27906128] (WB, Human)

Bai X, Wang J, Huo L et al. Serine/Threonine Kinase CHEK1-Dependent Transcriptional Regulation of RAD54L Promotes Proliferation and Radio Resistance in Glioblastoma. Transl Oncol 2017-12-26 [PMID: 29287241] (Mouse)

Terai K, Shibata E, Abbas T, Dutta A. Degradation of p12 Subunit by CRL4Cdt2 E3 Ligase Inhibits Fork Progression after DNA Damage. J Biol Chem. 2013-10-18 [PMID: 24022480] (WB, Human)

Jazaeri AA, Shibata E, Park J et al. Overcoming platinum resistance in preclinical models of ovarian cancer using the neddylation inhibitor MLN4924. Mol Cancer Ther. 2013-08-12 [PMID: 23939375] (WB, Human)

Shiotani B, Kobayashi M, Watanabe M et al. Involvement of the ATR- and ATM-dependent checkpoint responses in cell cycle arrest evoked by pierisin-1. Mol Cancer Res 2006-02-01 [PMID: 16513843]

Hong J, Hu K, Yuan Y et al. CHK1 targets spleen tyrosine kinase (L) for proteolysis in hepatocellular carcinoma J Clin Invest 2012-06-01 [PMID: 22585575] (WB, IF/IHC, Human)

Karnani N, Dutta A. The effect of the intra-S-phase checkpoint on origins of replication in human cells. Genes Dev;25 (6):621-33. 2011-03-15 [PMID: 21406556]

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## Products Related to NB100-464

| | |
|---|---|
| NBL1-09146 | Chk1 Overexpression Lysate |
| HAF008 | Goat anti-Rabbit IgG Secondary Antibody [HRP] |
| NB7160 | Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP] |
| NBP2-24891 | Rabbit IgG Isotype Control |

### Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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