

# Orc2 (C-5): sc-398410

## BACKGROUND

Orc1 and Orc2 (also designated RRR1 or SIR5) are two of the six subunits that compose the yeast origin of replication complex (Orc). This complex binds to autonomously replicating sequences (ARS) and serves as an initiator protein for DNA replication. The minichromosome maintenance (MCM) proteins also play an essential role in regulating DNA replication by binding to chromatin and activating the ORC-ARS complex. Cdc6, involved in limiting DNA replication to once per cell cycle, binds to the ORC and is essential for the assembly of the MCM proteins. The transcription factor Abf1 (also designated Obf1 or Baf1) also binds to the ARS and plays a role in gene silencing as well as in DNA replication.

## REFERENCES

1. Foss, M., et al. 1993. Origin recognition complex (ORC) in transcriptional silencing and DNA replication in *S. cerevisiae*. *Science* 262: 1838-1844.
2. Bell, S.P., et al. 1993. Yeast origin recognition complex functions in transcription silencing and DNA replication. *Science* 262: 1844-1849.
3. McBroom, L.D.B. and Sadowski, P.D. 1995. Functional analysis of the ABF1-binding sites within the Ya regions of the MATa and HMRA loci of *Saccharomyces cerevisiae*. *Curr. Genet.* 28: 1-11.
4. Bell, S.P., et al. 1995. The multidomain structure of Orc1p reveals similarity to regulators of DNA replication and transcriptional silencing. *Cell* 83: 563-568.
5. Cocker, J.H., et al. 1996. An essential role for the Cdc6 protein in forming the pre-replicative complexes of budding yeast. *Nature* 379: 180-182.
6. Donovan, S., et al. 1997. Cdc6p-dependent loading of Mcm proteins onto pre-replicative chromatin in budding yeast. *Proc. Natl. Acad. Sci. USA* 94: 5611-5616.

## SOURCE

Orc2 (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 611-622 near the C-terminus of Orc2 of *Saccharomyces cerevisiae* origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Orc2 (C-5) is available conjugated to agarose (sc-398410 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398410 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398410 PE), fluorescein (sc-398410 FITC), Alexa Fluor® 488 (sc-398410 AF488), Alexa Fluor® 546 (sc-398410 AF546), Alexa Fluor® 594 (sc-398410 AF594) or Alexa Fluor® 647 (sc-398410 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398410 AF680) or Alexa Fluor® 790 (sc-398410 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398410 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

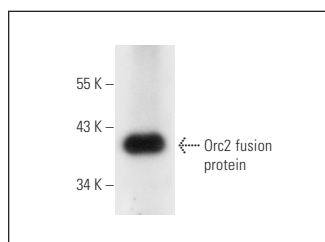
Orc2 (C-5) is recommended for detection of Orc2 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Orc2: 57 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Orc2 (C-5): sc-398410. Western blot analysis of *Saccharomyces cerevisiae* recombinant Orc2 fusion protein.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.