

Recombinant Human ORC1

Cat. No. ORC1-30513TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant fragment corresponding to amino acids 1-110 of Human ORC1 with proprietary tag; Predicted MWt 37.73 kDa.
Species	Human
Source	Wheat Germ
ProteinLength	110 amino acids
Description	The origin recognition complex (ORC) is a highly conserved six subunits protein complex essential for the initiation of the DNA replication in eukaryotic cells. Studies in yeast demonstrated that ORC binds specifically to origins of replication and serves as a platform for the assembly of additional initiation factors such as Cdc6 and Mcm proteins. The protein encoded by this gene is the largest subunit of the ORC complex. While other ORC subunits are stable throughout the cell cycle, the levels of this protein vary during the cell cycle, which has been shown to be controlled by ubiquitin-mediated proteolysis after initiation of DNA replication. This protein is found to be selectively phosphorylated during mitosis. It is also reported to interact with MYST histone acetyltransferase 2 (MyST2/HBO1), a protein involved in control of transcription silencing. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.
Molecular Weight	37.730kDa inclusive of tags
Form	Liquid

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Purity	Proprietary Purification
Storage buffer	pH: 8.00 Constituents: 0.79% Tris HCl, 0.31% Glutathione
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequences of amino acids	MAHYPTRLTTRKTYSWVGRPLLDRKLHYQTYREMCVKTEGCSTEIHIQIGQFVLIEG DDDENPYVAKLLELFEDDSDPPPKKRARVQWFVRFCEVPACKRHLLGRKPGAQ
Sequence Similarities	Belongs to the ORC1 family. Contains 1 BAH domain.

GENE INFORMATION

Gene Name	ORC1 origin recognition complex, subunit 1 [Homo sapiens]
Official Symbol	ORC1
Synonyms	ORC1; origin recognition complex, subunit 1; ORC1L, origin recognition complex, subunit 1 (yeast homolog) like , origin recognition complex, subunit 1 homolog (S. cerevisiae) , origin recognition complex, subunit 1 like (yeast); origin recognition comp
Gene ID	4998
mRNA Refseq	NM_001190818
Protein Refseq	NP_001177747
MIM	601902
Uniprot ID	Q13415

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Chromosome Location	1p32
Pathway	Activation of ATR in response to replication stress, organism-specific biosystem; Activation of the pre-replicative complex, organism-specific biosystem; Assembly of the ORC complex at the origin of replication, organism-specific biosystem; Assembly of the pre-replicative complex, organism-specific biosystem; Association of licensing factors with the pre-replicative complex, organism-specific biosystem;
Function	ATP binding; DNA binding; nucleoside-triphosphatase activity; nucleotide binding; protein binding;

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