

## Product datasheet for RC202879

### ICAD (DFFA) (NM\_004401) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ICAD (DFFA) (NM_004401) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ICAD
Synonyms:	DFF-45; DFF1; ICAD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202879 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGGTGACCGGGGACGCCGGGTACCAGAATCTGGCGAGATCCGGACTCTAAAGCCGTGTCTGCTGC  
GCCGCAACTACAGCCGCGAACAGCACGGCGTGGCCGCTCCTGCCTCGAAGACCTGAGGAGCAAGGCCTG  
TGACATTCTGGCCATTGATAAGTCCCTGACACCAGTCACCCTGGTCTGGCAGAGGATGGCACCATAGTG  
GATGATGACGATTACTTTCTGTGTCTACCTTCCAATACTAAGTTTGTGGCATTGGCTAGTAATGAGAAAT  
GGGCATACAACAATTCAGATGGAGGTACAGCTTGGATTTCCAAGAGTCTTTGATGTAGATGAAACAGA  
CAGCGGGGACGGTTGAAGTGAAGAATGTGGCCAGGCAGCTGAAAGAAGATCTGTCCAGCATCATCCTC  
CTATCAGAGGAGGACCTCCAGATGCTTGTGACGCTCCCTGCTCAGACCTGGCTCAGGAACCTACGTCAGA  
GTTGTGCCACCGTCCAGCGGCTGCAGCACACACTCCAACAGGTGCTTGACCAAAGAGAGGAAGTGCGTCA  
GTCCAAGCAGCTCCTGCAGCTGTACCTCCAGGCTTTGGAGAAAGAGGGCAGCCTCTTGTCAAAGCAGGAA  
GAGTCAAAGCTGCCTTTGGTGAGGAGGTGGATGCAGTAGACACGGGTATCAGCAGAGAGACCTCCTCGG  
ACGTTGCGCTGGCGAGCCACATCCTTACTGCAGTGAAGGAGAAGCAGGCTCCAGAGCTGAGCTTATCTAG  
TCAGGATTTGGAGTTGGTTACCAAGGAAGACCCAAAGCACTGGCTGTTGCCTTGAAGTGGGACATAAAG  
AAGACGGAGACTGTTTCAGGAGCCTGTGAGTGGGAGCTCGCCCTGCGCCTGCAGCAGCGCAGAGCTTGC  
ATTCTCCGGAGCATCTCAGCAAGCAAGGCCTACCACCTGGTACCTGCAGAATCCTAAGCGAGCCAG  
ACAGGATCCCACA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC202879 protein sequence  
Red=Cloning site Green=Tags(s)

```
MEVTGDAGVPESGEIRTLKPCLLRNYSREQHGVAASCLEDLRSKACDILAIKSLTPVTLVLAEDGTIV
DDDDYFLCLPSNTKFVALASNEKWAYNNSDGGTAWISQESFDVDETD SGAGLKWKNVARQLKEDLSSIIL
LSEEDLQMLVDAPCSDLAQELRQSCATVQRLQHTLQQVLDQREEVRSKQLLQLYLQALEKEGSLLSKQE
ESKAAFGEEDAVDTGISRETSSDVALASHILTALREKQAPELSSQDLELVTKEDPKALAVALNWDIK
KTETVQEACEWELALRLQQTQSLHSLRSISASKASPPGDLQNPKRARQDPT
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6076\\_c04.zip](https://cdn.origene.com/chromatograms/mk6076_c04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_004401

**ORF Size:** 993 bp

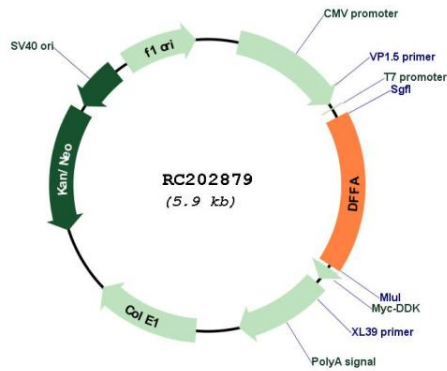
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

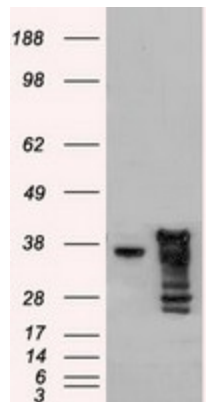
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_004401.3</a>
<b>RefSeq Size:</b>	2053 bp
<b>RefSeq ORF:</b>	996 bp
<b>Locus ID:</b>	1676
<b>UniProt ID:</b>	<a href="#">O00273</a>
<b>Cytogenetics:</b>	1p36.22
<b>Domains:</b>	CAD
<b>Protein Pathways:</b>	Apoptosis
<b>MW:</b>	36.6 kDa
<b>Gene Summary:</b>	<p>Apoptosis is a cell death process that removes toxic and/or useless cells during mammalian development. The apoptotic process is accompanied by shrinkage and fragmentation of the cells and nuclei and degradation of the chromosomal DNA into nucleosomal units. DNA fragmentation factor (DFF) is a heterodimeric protein of 40-kD (DFFB) and 45-kD (DFFA) subunits. DFFA is the substrate for caspase-3 and triggers DNA fragmentation during apoptosis. DFF becomes activated when DFFA is cleaved by caspase-3. The cleaved fragments of DFFA dissociate from DFFB, the active component of DFF. DFFB has been found to trigger both DNA fragmentation and chromatin condensation during apoptosis. Two alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq, Jul 2008]</p>

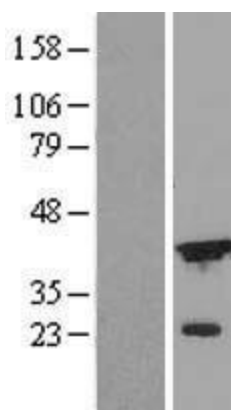
Product images:



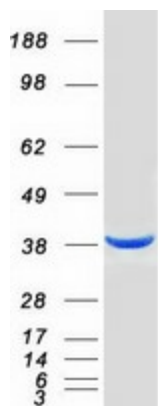
Circular map for RC202879



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY DFFA (Cat# RC202879, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-DFFA (Cat# [TA500062]). Positive lysates [LY418008] (100ug) and [LC418008] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY418008]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202879 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified DFFA protein (Cat# [TP302879]). The protein was produced from HEK293T cells transfected with DFFA cDNA clone (Cat# RC202879) using MegaTran 2.0 (Cat# [TT210002]).