

# Product datasheet for RC204604L3

### 9620 Medical Center Drive, Ste 200 Rockville, MD 20850, US Phone: +1-888-267-4436 https://www.origene.com techsupport@origene.com EU: info-de@origene.com

CN: techsupport@origene.cn

OriGene Technologies, Inc.

## SMAD2 (NM\_005901) Human Tagged Lenti ORF Clone

**Product data:** 

**Product Type:** Expression Plasmids

**Product Name:** SMAD2 (NM\_005901) Human Tagged Lenti ORF Clone

Tag: Myc-DDK
Symbol: SMAD2

Synonyms: hMAD-2; hSMAD2; JV18; JV18-1; MADH2; MADR2

Mammalian Cell Puromycin

Selection:

**Vector:** pLenti-C-Myc-DDK-P2A-Puro (PS100092)

E. coli Selection: Chloramphenicol (34 ug/mL)

ORF Nucleotide The ORF insert of this clone is exactly the same as(RC204604).

Sequence:

**Restriction Sites:** Sgfl-Mlul

**Cloning Scheme:** 





<sup>\*</sup> The last codon before the Stop codon of the ORF.

**ACCN:** NM\_005901

ORF Size: 1401 bp





### SMAD2 (NM\_005901) Human Tagged Lenti ORF Clone - RC204604L3

**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).

**Reconstitution Method:** 1. Centrifuge at 5,000xg for 5min.

2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.

3. Close the tube and incubate for 10 minutes at room temperature.

4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid

at the bottom.

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.

**RefSeq:** <u>NM 005901.3</u>

RefSeq Size: 5415 bp
RefSeq ORF: 1404 bp
Locus ID: 4087

 UniProt ID:
 Q15796

 Cytogenetics:
 18q21.1

**Domains:** DWB, DWA, MH1

Protein Families: Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Stem

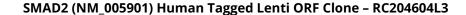
cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP

signaling pathway, Transcription Factors

Protein Pathways: Adherens junction, Cell cycle, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-

beta signaling pathway, Wnt signaling pathway

MW: 52.1 kDa





#### **Gene Summary:**

The protein encoded by this gene belongs to the SMAD, a family of proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. SMAD proteins are signal transducers and transcriptional modulators that mediate multiple signaling pathways. This protein mediates the signal of the transforming growth factor (TGF)-beta, and thus regulates multiple cellular processes, such as cell proliferation, apoptosis, and differentiation. This protein is recruited to the TGF-beta receptors through its interaction with the SMAD anchor for receptor activation (SARA) protein. In response to TGF-beta signal, this protein is phosphorylated by the TGF-beta receptors. The phosphorylation induces the dissociation of this protein with SARA and the association with the family member SMAD4. The association with SMAD4 is important for the translocation of this protein into the nucleus, where it binds to target promoters and forms a transcription repressor complex with other cofactors. This protein can also be phosphorylated by activin type 1 receptor kinase, and mediates the signal from the activin. Alternatively spliced transcript variants have been observed for this gene. [provided by RefSeq, May 2012]