Human SMAD2 Knockdown Cell Lysate

Cat. No. SMAD2-492HKCL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	WB-validated SMAD2 Knockdown HT-1080 Cell Lysate
Species	Human
Source	HT-1080
Description	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.
Form	Cell-Tissue Lysis buffer

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Molecular Mass	52 kDa
Notes	Instruction of use: This knockdown cell lysate should be paired with wild-type HT-1080 cell lysate for use. For Western blotting, we recommend running wild-type and knockdown lysates on the same gel, and loading each well with equal volume and equal amount of total proteins.
Storage	Store at -20 centigrade.
Concentration	Lot-specific
Shipping	Blue Ice
Components	1 vial of 100 µg WT HT-1080 cell lysate 1 vial of 100 µg SMAD2 KD HT-1080 cell lysate
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
Lysate QC	RT-qPCR; Western Blotting (WB)

GENE INFORMATION

Gene Name	SMAD2 SMAD family member 2 [Homo sapiens (human)]
Official Symbol	SMAD2

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Synonyms	SMAD2; SMAD family member 2; MAD, mothers against decapentaplegic homolog 2 (Drosophila), MADH2, SMAD, mothers against DPP homolog 2 (Drosophila); mothers against decapentaplegic homolog 2; JV18 1; MADR2; MAD homolog 2; mother against DPP homolog 2; Sma- and Mad-related protein 2; SMAD, mothers against DPP homolog 2; JV18; MADH2; JV18-1; hMAD-2; hSMAD2; MGC22139; MGC34440;
Gene ID	4087
mRNA Refseq	NM_001003652
Protein Refseq	NP_001003652
MIM	601366
UniProt ID	Q15796

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