

## Product datasheet for **SC112475**

### SMURF 2 (SMURF2) (NM\_022739) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMURF 2 (SMURF2) (NM_022739) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMURF 2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL6</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_022739 edited

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GAATTCGGCAGAGGGGAAGCGGCCGAGCCAGAGTTCTGCTCCGGCGCCCCGAGCACC
GCCCGCTTCAGCCGACCAGCCCCGTCGGCTACTGGCCTCGCCGAGACGAGAGGAGGGAA
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ATAAGCAATTGCTTGGGAAGTCAATTACCTTGGATGACATGGAGTTAGTAGATCCGGATC  
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 GATCGCACCCTGCACTCCAGCCTGGGCGACAAGAGTGAGACTCCGTCCCGCCCAAAAA  
 AAAAAAAAAAAAACTCGAC

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_022739 unedited  
 NGGCTTCTTACCCCGCCGTTGCCGCAATGGGCGGTAGGCGTGTACGGTGGGAAGGTCT  
 ATATAAGCAGAGCTCATTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGCGAG  
 CGGCCCGCAATTCGGCACGAGGGGAAGCGGCCGAGCCAGAGTTCTGCTCCGGCGCCCC  
 GAGCACCCCGCTTTCAGCCGACCAGCCCGTCCGGCTACTGGGCTCGCCGAGACGAGAG  
 GAGGGAAGGCCCTCGGCGCCCGCCCGCCCGCCGGGACATGTCTAACCCCGGAGGC  
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 AAGAAACAAGGTGCTGGATTTCTCGTTGTGTTCTGTTCTTTTCCAATGCCATCAACCGC  
 CTCAAAGACACTGGTTATCAGAGTTGGATTTATGCAAACTCGGGCCAAATGACAATGAT  
 ACAGTTAGAGGACAGATAGTAAAGTCTTCCAGTCCAGAGACCGAATAGGCACAGGAGGA  
 CAAGTTGTGACTGCAGTCGTTTATTTGATAACGATTTACCAGACGGCTGGGAAGAAAGG  
 AGAACCCGCTCTGGAAGATCCAGTNTCTAAACCATATAAACAGAACTANCGCATGGGAGC  
 GCCNAACACGACCGGCATCCCGATATTCTAGCCCTGGCAGACCTTAGTGTCTTTGNTG  
 ATGAGAACACTCCATTAGTGAACAAT

**Restriction Sites:** NotI-NotI  
**ACCN:** NM\_022739  
**Insert Size:** 5000 bp

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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_022739.3</a> , <a href="#">NP_073576.1</a>
<b>RefSeq Size:</b>	3866 bp
<b>RefSeq ORF:</b>	2247 bp
<b>Locus ID:</b>	64750
<b>UniProt ID:</b>	<a href="#">Q9HAU4</a>
<b>Cytogenetics:</b>	17q23.3-q24.1
<b>Domains:</b>	C2, HECT, WW
<b>Protein Families:</b>	Adult stem cells, Druggable Genome, ES Cell Differentiation/IPS, Transcription Factors
<b>Protein Pathways:</b>	Allograft rejection, Antigen processing and presentation, Autoimmune thyroid disease, Cell adhesion molecules (CAMs), Endocytosis, Graft-versus-host disease, TGF-beta signaling pathway, Type I diabetes mellitus, Ubiquitin mediated proteolysis, Viral myocarditis
<b>Gene Summary:</b>	E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. Interacts with SMAD1 and SMAD7 in order to trigger their ubiquitination and proteasome-dependent degradation. In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with SCYE1. Forms a stable complex with the TGF-beta receptor-mediated phosphorylated SMAD2 and SMAD3. In this way, SMAD2 may recruit substrates, such as SNON, for ubiquitin-mediated degradation. Enhances the inhibitory activity of SMAD7 and reduces the transcriptional activity of SMAD2. Coexpression of SMURF2 with SMAD1 results in considerable decrease in steady-state level of SMAD1 protein and a smaller decrease of SMAD2 level.[UniProtKB/Swiss-Prot Function]