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## Human Transforming Growth Factor $\beta$ 3 (hTGF- $\beta$ 3)

**For Research Use Only. Not for Use in Diagnostic Procedures.**

MW (kDa):	UniProt ID:	Entrez-Gene Id:
12	#P10600	7043
<b>Background</b>	TGF- $\beta$ 3 can induce cell proliferation and angiogenesis, and can promote some immune events while inhibiting others (1-3). TGF- $\beta$ 3 is produced by chondrocytes, glial cells, astrocytes and some cancer cells (3,4). TGF- $\beta$ 3 binds to T $\beta$ R <sub>II</sub> homodimer, which then complexes with T $\beta$ R <sub>I</sub> homodimer (1,5). The oligomeric receptor complex phosphorylates subsets of SMAD proteins that then act to induce or suppress target genes (1,5). Based on knock-out studies in mice, TGF- $\beta$ 3 is critical for lung and palate development (6).	
<b>Endotoxin</b>	Less than 0.01 ng endotoxin/1 $\mu$ g hTGF- $\beta$ 3.	
<b>Purity</b>	>98% as determined by SDS-PAGE of 6 $\mu$ g reduced (+) and non-reduced (-) recombinant hTGF- $\beta$ 3. Less than 5% migrates as monomer hTGF- $\beta$ 3 under non-reduced (-) conditions. All lots are greater than 98% pure.	
<b>Source / Purification</b>	Recombinant human TGF- $\beta$ 3 (hTGF- $\beta$ 3) Ala301-Ser412 (Accession #NP_003230) was expressed in human 293 cells at Cell Signaling Technology.	
<b>Bioactivity</b>	The bioactivity of recombinant hTGF- $\beta$ 3 was determined by assessing inhibition of IL-4 induced HT-2 cell proliferation. The ED <sub>50</sub> of each lot is between 0.02-0.1 ng/ml.	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Siegel, P.M. and Massagué, J. (2003) <i>Nat Rev Cancer</i> 3, 807-21.</li> <li>2. Bierie, B. and Moses, H.L. (2006) <i>Nat Rev Cancer</i> 6, 506-20.</li> <li>3. Damstrup, L. et al. (1993) <i>Br J Cancer</i> 67, 1015-21.</li> <li>4. Constam, D.B. et al. (1992) <i>J Immunol</i> 148, 1404-10.</li> <li>5. Moustakas, A. and Heldin, C.H. (2009) <i>Development</i> 136, 3699-714.</li> <li>6. Dünker, N. and Kriegelstein, K. (2000) <i>Eur J Biochem</i> 267, 6982-8.</li> </ol>	

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