

Human Insulin-like Growth Factor II (hIGF-II)



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MW (kDa):	UniProt ID:	Entrez-Gene Id:
6	#P01344	3481
Background	IGF-II is a potent cellular mitogen that is closely related to IGF-I (1). IGF-II is primarily produced by the liver and is frequently overexpressed in tumors (1,2). IGF-II binds to the IGF-IR, activating the AKT, mTOR, ERK, and JNK pathways (1). IGF-II signaling is regulated by several distinct mechanisms. First, IGF binding proteins (IGFBPs) bind to IGF-II and block interactions with the IGF-IR (1-3). Second, the IGF-IIR, binds to and acts as a molecular trap for IGF-II (1-3). Lastly, the IGF2 gene is an imprinted gene, and loss of imprinting leads to increased IGF-II levels (1-3). Aberrant levels of IGF-II are associated with Wilms tumor, Beckwith-Wiedmann syndrome, and colorectal cancer (1,2).	
Endotoxin	Less than 0.01 ng endotoxin/1 µg hIGF-II.	
Purity	>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hIGF-II. All lots are greater than 98% pure.	
Source / Purification	Recombinant human IGF-II (hIGF-II) Ala25-Glu94 (Accession # P01344-2) was produced in <i>E. coli</i> at Cell Signaling Technology.	
Bioactivity	The bioactivity of recombinant hIGF-II was determined in a cell proliferation assay using primary human dermal fibroblasts. The ED ₅₀ of each lot is between 10-20 ng/ml.	
Background References	<ol style="list-style-type: none"> Chitnis, M.M. et al. (2008) <i>Clin Cancer Res</i> 14, 6364-70. Pollak, M. (2008) <i>Nat Rev Cancer</i> 8, 915-28. Sullivan, K.A. et al. (2008) <i>Endocrinology</i> 149, 5963-71. 	

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