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Mouse Insulin-like Growth Factor I (mIGF-I)

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

MW (kDa):	UniProt ID:	Entrez-Gene Id:
7	#P05017	16000

Background

Most circulating endocrine-acting IGF-I is produced by hepatocytes, and paracrine- or autocrine-acting IGF-I is produced by defined cell types within specific tissues (1,2). Many neoplastic cells produce IGF-I, which regulates a number of cellular processes including energy metabolism, proliferation, and cell survival (3,4). IGF-I activity is regulated by one or more of the six extracellular IGF-binding proteins (IGFBPs). IGFBPs bind to IGF-I, and most inhibit the binding between IGF-I and the IGF-I receptor (IGFIR) (1,2). Some IGFBPs may increase cell responses to IGF-I. Binding of IGF-I to IGFIR activates the Akt, JNK, and Erk pathways (2). IGF-I and IGFIR are frequently expressed by cancer cells and may contribute to the proliferation and viability of a number of cancer types (1,2).

Endotoxin

Less than 0.01 ng endotoxin/1 µg mIGF-I.

Purity

>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant mIGF-I. All lots are greater than 98% pure.

Source / Purification

Recombinant mouse IGF-I (mIGF-I) Gly33-Ala102 (Accession #NP_001104746) was produced in *E. coli* at Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant mIGF-I was determined in a cell proliferation assay using primary human dermal fibroblasts. The ED₅₀ of each lot is between 3-15 ng/ml.

Background References

- Pollak, M. (2008) *Nat Rev Cancer* 8, 915-28.
- Chitnis, M.M. et al. (2008) *Clin Cancer Res* 14, 6364-70.
- Karey, K.P. and Sirbasku, D.A. (1988) *Cancer Res* 48, 4083-92.
- Small, T.W. and Pickering, J.G. (2009) *J Biol Chem* 284, 24684-95.

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