IGF-1 Analog

N-terminus

missing

D = Asp
E = Glu
K = Lys
R = Arg

COOH $\rightleftharpoons$ COO$^-$ + H$^+$  

pK $\approx$ 4

NH$_3^+$ $\rightleftharpoons$ NH$_2$ + H$^+$  

pK $\approx$ 10.5 - 12.5

Figure by MIT OCW.
<1nM $^{125}$-IGF-I added upstream

$\tau_{lag} = 267$ min

100nM IGF-I
Binding of Insulin-Like Growth Factor-1 (IGF-1) to IGF Binding Proteins in Extracellular Matrix (NOT CELL SURFACE RECEPTORS)

Figure by MIT OCW. After Figure 2A in Bhakta, N. R., et. al. "The Insulin-like Growth Factors (IGFs) I and II Bind to Articular Cartilage via the IGF-binding Proteins." J Biol Chem 275, no. 8 (2000).
Figure removed due to copyright considerations. See Figure 1 in Garcia, A. M., et. al. "Transport and Binding of Insulin-like Growth Factor I through Articular Cartilage." Archives of Biochemistry and Biophysics 415, no. 1 (July 1, 2003): 69-79.
Figure removed due to copyright considerations. See Figure 2 in Garcia, A. M., et. al. "Transport and Binding of Insulin-like Growth Factor I through Articular Cartilage." *Archives of Biochemistry and Biophysics* 415, no. 1 (July 1, 2003): 69-79.
$\tau_{\text{lag}} = 230$ min

$D = 2.2 \times 10^{-7}$ cm$^2$/s

Lag Time ($\tau_{\text{lag}}$)

Calibration

Steady Flux

15nM IGF−I

75nM Analog
Figure removed due to copyright considerations. See Figure 3B in Garcia, A. M., et. al. "Transport and Binding of Insulin-like Growth Factor I through Articular Cartilage." *Archives of Biochemistry and Biophysics* 415, no. 1 (July 1, 2003): 69-79.
Figure removed due to copyright considerations. See Figure 5 in Garcia, A. M., et. al. "Transport and Binding of Insulin-like Growth Factor I through Articular Cartilage." *Archives of Biochemistry and Biophysics* 415, no. 1 (July 1, 2003): 69-79.
Figure removed due to copyright considerations. See Figure 4 in Garcia, A. M., et. al. "Transport and Binding of Insulin-like Growth Factor I through Articular Cartilage." Archives of Biochemistry and Biophysics 415, no. 1 (July 1, 2003): 69-79.