

Human IGFBP-3 Antibody Pair Set

Catalog No.	E-KAB-0228	Applications	ELISA
Synonyms	IGFBP3, BP-53, IBP3		

Kit components & Storage

Title	Specifications	Storage
Human IGFBP-3 Capture Antibody	1 vial, 100 µg	Store at -20°C for one year. Avoid freeze / thaw cycles.
Human IGFBP-3 Detection Antibody (Biotin)	1 vial, 50 µL	Store at -20°C for one year. Avoid freeze / thaw cycles.

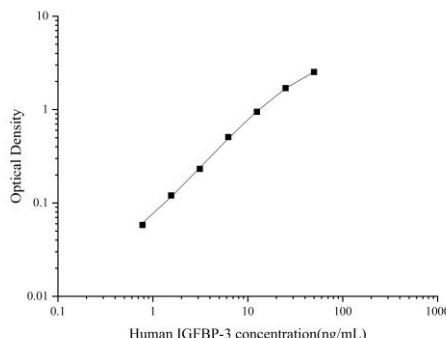
Note: Centrifuge before opening to ensure complete recovery of vial contents.

Product Information

Items		Characteristic (E-KAB-0228)	
		Human IGFBP-3 Capture Antibody	Human IGFBP-3 Detection Antibody (Biotin)
Immunogen Information	Immunogen	Recombinant Human IGFBP-3 protein	Recombinant Human IGFBP-3 protein
	Swissprot	P17936	
Product details	Reactivity	Human	Human
	Host	Mouse	Goat
	Conjugation	Unconjugated	Biotin
	Concentration	0.5mg/mL	/
	Buffer	PBS with 0.04% Proclin 300, 50% glycerol, pH 7.4	PBS with 0.04% Proclin 300, 1% protective protein, 50% glycerol, pH 7.4
	Purify	Protein A or G	Antigen Affinity
	Specificity	Detects Human IGFBP-3 in ELISAs.	

Applications

Human IGFBP-3 Sandwich ELISA Assay:

	Recommended Concentration/Dilution	Reagent	Images																		
ELISA Capture	0.5-4µg/mL	Human IGFBP-3 Capture Antibody	 <p>The graph displays a standard curve for the Human IGFBP-3 Sandwich ELISA Assay. The x-axis represents Human IGFBP-3 concentration in ng/mL, ranging from 0.1 to 1000 on a logarithmic scale. The y-axis represents Optical Density, ranging from 0.01 to 10 on a logarithmic scale. The data points form a straight line, indicating a strong positive correlation between the concentration of Human IGFBP-3 and the resulting optical density.</p> <table border="1"> <caption>Approximate data points from the standard curve</caption> <thead> <tr> <th>Human IGFBP-3 concentration (ng/mL)</th> <th>Optical Density</th> </tr> </thead> <tbody> <tr> <td>0.5</td> <td>0.05</td> </tr> <tr> <td>1</td> <td>0.1</td> </tr> <tr> <td>2</td> <td>0.2</td> </tr> <tr> <td>5</td> <td>0.5</td> </tr> <tr> <td>10</td> <td>1.0</td> </tr> <tr> <td>20</td> <td>2.0</td> </tr> <tr> <td>50</td> <td>5.0</td> </tr> <tr> <td>100</td> <td>10.0</td> </tr> </tbody> </table>	Human IGFBP-3 concentration (ng/mL)	Optical Density	0.5	0.05	1	0.1	2	0.2	5	0.5	10	1.0	20	2.0	50	5.0	100	10.0
Human IGFBP-3 concentration (ng/mL)	Optical Density																				
0.5	0.05																				
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5	0.5																				
10	1.0																				
20	2.0																				
50	5.0																				
100	10.0																				
ELISA Detection	1:1000-1:10000	Human IGFBP-3 Detection Antibody (Biotin)																			

Note: This standard curve is only for demonstration purposes. A standard curve should be generated for each assay!

Background

The Insulin-like Growth Factor (IGF) signaling system plays a central role in cellular growth, differentiation, and proliferation. IGFBP3 is the most abundant IGF binding protein in human serum and is a growth inhibitory, apoptosis-inducing molecule, capable of acting via IGF-dependent and IGF-independent mechanisms. It appears to function both by cell cycle blockade and the induction of apoptosis. IGFBP3 can be transported to the nucleus by an importin beta mediated mechanism, where it has been shown to interact with the retinoid X receptor alpha and possibly other nuclear elements. IGFBP3 antiproliferative signaling appears to require an active transforming growth factor-beta (TGF-beta) signaling pathway, and IGFBP3 stimulates phosphorylation of the TGF-beta signaling intermediates Smad2 and Smad3. IGFBP3 has IGF-independent roles in inhibiting cell proliferation in cancer cell lines. Nuclear transcription factor, retinoid X receptor (RXR)-alpha, and IGFBP3 functionally interact to reduce prostate tumor growth and prostate-specific antigen in vivo. Several clinical studies have proposed that individuals with IGFBP3 levels in the upper range of normal may have a decreased risk for certain common cancers. This includes evidence of a protective effect against breast cancer, prostate cancer, colorectal cancer, and lung cancer. Moreover, IGFBP3 inhibits insulin-stimulated glucose uptake into adipocytes independent of IGF.