



# High Sensitivity Total Insulin Assay Kit

Measurable under 0.1ng/mL total insulin  
in mouse and rat sample in fasting

Research Use Only

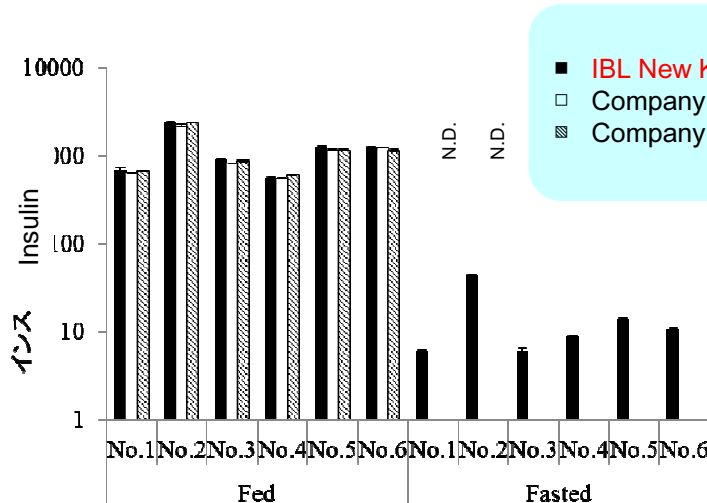
It has been recognized that it is important to measure insulin in plasma of rodent in non-clinical test of drug development of type 2 diabetes. Measuring insulin in fasting (F-IRI) for calculation of HOMA-R that is a marker of insulin resistance is especially critical, however it was difficult to measure F-IRI in normal rat and mouse samples that is very low concentration by existing commercially available assay kit.

This assay kit consists of 2 specific monoclonal antibodies (clone: 13G4 and 26B2) that were obtained using antibody maturation technique (ref.1) and we have achieved to develop the kit with 10 to 20 times higher sensitivity than currently available commercial kits. The assay kit can measure total insulin less than 0.1ng/mL in normal mouse and rat samples in fasting because of the superior sensitivity.

Produce Code	Product Name	Volume	Measurement Range	Sample Type	Sample Volume	Measuring Samples	
						Serum	EDTA-Plasma
27705	Mouse/Rat Total Insulin (high sensitivity) Assay Kit - IBL ELISA	96 well	1.25 ~ 80 pg/mL	M/R	2µL	○	○
Under Development	Mouse/Rat Total Insulin (High sensitivity) Assay Kit - IBL CLEIA	96 well	1.5 ~ 30000 pg/mL	M/R	5µL	○	○

M: Mouse R: Rat

## Measurement insulin in mouse plasma samples.



Coating: Room Temperature, 60 min  
1<sup>st</sup> reaction: 2~8°C, Overnight



(ELISA)  
2<sup>nd</sup> reaction: 2~8 °C, 60 min  
Chromogen : HRP/TMB 30 min

(CLEIA: Chemiluminescent Enzyme Immuno Assay)

2<sup>nd</sup> reaction : Room Temperature,  
2 ~ 3 hours  
Luminescence : ALP/CDP-Star,  
15 ~ 20min

The graph is quoted from *Anal Biochem.* 2015 Mar 15;473:72-9. Comparison data of CLEIA system

### Reference

1: Imai S, Naito S, Takahashi T, Yamauchi A, Nakamura E, Sato M, Mitsuda Y, Takagi H, Numata Y, Fujii I, Yamane S. Development of an ultrasensitive immunoassay using affinity matured antibodies for the measurement of rodent insulin. *Anal Biochem.* 2015 Mar 15;473:72-9.

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