



PicoKine™ ELISA

Catalog number: EK0868

For the quantitation of **Human DKK4** concentrations in cell culture supernatants, serum and plasma (heparin, EDTA).

This package insert must be read in its entirety before using this product.

For research use only. Not for use in diagnostic procedures.

Human DKK-4 / Dickkopf 4 ELISA Kit PicoKine®

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Assay Principle

The Boster Picokine™ Human DKK4 Pre-Coated ELISA (Enzyme-Linked Immunosorbent Assay) kit is a solid-phase immunoassay specially designed to measure Human DKK4 with a 96-well strip plate that is pre-coated with antibody specific for DKK4. The detection antibody is a biotinylated antibody specific for DKK4. The capture antibody is a monoclonal antibody from mouse and the detection antibody is a biotinylated polyclonal antibody from goat. The kit includes Human DKK4 protein as standards.

To measure Human DKK4, add standards and samples to the wells, then add the biotinylated detection antibody. Wash the wells with PBS or TBS buffer, and add Avidin-Biotin-Peroxidase Complex (ABC-HRP). Wash away the unbounded ABC-HRP with PBS or TBS buffer and add TMB. TMB is an HRP substrate and will be catalyzed to produce a blue color product, which changes into yellow after adding the acidic stop solution. The absorbance of the yellow product at 450nm is linearly proportional to Human DKK4 in the sample. Read the absorbance of the yellow product in each well using a plate reader, and benchmark the sample wells' readings against the standard curve to determine the concentration of Human DKK4 in the sample. For more information on assay principle, protocols, and troubleshooting tips, see Boster's ELISA Resource Center at <https://www.bosterbio.com/elisa-technical-resource-center>.

Overview

Product Name	Human DKK-4 / Dickkopf 4 ELISA Kit PicoKine®
Reactive Species	Human
Size	96 wells/kit, with removable strips.
Description	Human DKK-4 / Dickkopf 4 ELISA Kit PicoKine™ (96 Tests). Quantitate Human DKK4 in cell culture supernatants, serum and plasma (heparin, EDTA). Sensitivity: 10pg/ml.
Sensitivity*	<10 pg/ml
Detection Range	156 pg/ml - 10,000 pg/ml
Storage Instructions	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles (Ships with gel ice, can store for up to 3 days in room temperature. Freeze upon receiving.)
Uniprot ID	Q9UBT3

*The sensitivity or the minimum detectable dose (MDD) is the lower limit of the target protein that can be detected by the kit. It is determined by adding two standard deviations to the mean O.D. value of twenty (20) blank wells and calculating the corresponding concentration.

Technical Details

Capture/Detection Antibodies	The capture antibody is a monoclonal antibody from mouse and the detection antibody is a biotinylated polyclonal antibody from goat.

Specificity	Natural and recombinant Human DKK4
Standard	Expression system for standard: NS0; Immunogen sequence: L19-L224
Cross-reactivity	This kit is for the detection of Human DKK4. No significant cross-reactivity or interference between DKK4 and its analogs was observed. This claim is limited by existing techniques; therefore, cross-reactivity may exist with untested analogs.

Preparations Before Assay

Please read the following instructions before starting the experiment.

1. Read this manual in its entirety in order to minimize the chance of error.
2. Confirm that you have the appropriate non-supplied equipment available.
3. Confirm that the species, target antigen, and sensitivity of this kit are appropriate for your intended application.
4. Confirm that your samples have been prepared appropriately based upon recommendations (see Sample Preparation) and that you have sufficient sample volume for use in the assay.
5. When first using a kit, appropriate validation steps should be taken before using valuable samples. Confirm that the kit adequately detects the target antigen in your intended sample type(s) by running control samples.
6. If the concentration of target antigen within your samples is unknown, a preliminary experiment should be run using a control sample to determine the optimal sample dilution (see Sample Preparation).
7. To inspect the validity of experiment operation and the appropriateness of sample dilution proportion, a pilot experiment using standards and a small number of samples is recommended.
8. Before using the kit, spin tubes to bring down all components to the bottom of the tubes.
9. Don't let the 96-well plate dry out since this will inactivate active components on the plate.
10. Don't reuse tips and tubes to avoid cross-contamination.
11. Avoid using the reagents from different batches together.
12. The kit should not be used beyond the expiration date on the kit label. Any variation in diluent, operator, pipetting technique, washing technique, incubation time or temperature, and kit age can cause variation in binding. Variations in sample collection, processing, and storage may cause sample value differences.

Kit Components/Materials Provided

Description	Quantity	Volume	Storage of opened/reconstituted material
Anti-Human DKK4 Pre-coated 96-well Strip Microplate	1	12 strips of 8 wells	Return unused wells to the foil pouch. Reseal along the entire edge of the zip-seal. May be stored for up to 1 month at 4°C provided this is within the expiration date of the kit.
Human DKK4 Standard	2	10 ng/tube	Discard the DKK4 stock solution after 12 hours at 4°C. May be stored at -20°C for 48 hours.
Human DKK4 Biotinylated Antibody (100x)	1	100 µl	May be stored for up to 1 month at 4°C provided this is within the expiration date of the kit.
Avidin-Biotin-Peroxidase Complex (100x)	1	100 µl	
Sample Diluent	1	30 ml	
Antibody Diluent	1	12 ml	
Avidin-Biotin-Peroxidase Diluent	1	12 ml	
Color Developing Reagent (TMB)	1	10 ml	
Stop Solution	1	10 ml	
Wash Buffer (25x)	1	20 ml	
Plate Sealers	4	Piece	

Required Materials That Are Not Supplied

Microplate reader capable of reading absorbance at 450 nm.

Incubator.

Automated plate washer (optional)

Pipettes and pipette tips capable of precisely dispensing 0.5 µl through 1 ml volumes of aqueous solutions.

Multichannel pipettes are recommended for a large numbers of samples.

Deionized or distilled water.

500 ml graduated cylinders.

Test tubes for dilution.

Human DKK-4 / Dickkopf 4 ELISA Kit ®