

RE: 2/14

## ANTIGENIX AMERICA, INC.

### PRODUCT INFORMATION SUMMARY

#### Human BMP-2 ELISA Construction Kit

Product Number RHF913CK  
Approx. 960 tests

Product Number RHF913CKC  
With Developing Reagents:

Capture Antibody	100.0 ug	ELISA Coating Stabilizer	50 mL
Biotin-Labeled tracer	25.0 ug	Streptavidin-HRP	0.5mL
Antigen Standard	1.0 ug or 2.0 ug	TMB Substrate	( 50 mL x 2)
		WASH Buffer (20X)	100 mL

#### DESCRIPTION:

Human BMP-2 ELISA CONSTRUCTION Kit provides antigen affinity purified capture and tracer antibodies, and antigen standard for development of **approximately** ten microplate assays. Working concentrations must be optimized by customer.

Note: Reconstitute components only when ready to run assay.

#### CAPTURE ANTIBODY:

Provided as lyophilized, 100.0 ug, additive-free. Reconstitute in 0.50 mL sterile water (200.0 ug/mL). ( FREEZE aliquots for long-term storage)

#### TRACER ANTIBODY:

Provided as 25 ug ( lyophilized) **or** as 0.5 mL liquid - @ 50.0 ug/mL- ( **see vial**) of Biotin labeled, antigen-affinity purified antibody, additive-free. Reconstitute lyophilized vial in 500 uL sterile water **containing 0.1% BSA**. ( FREEZE aliquots for long-term storage)

For biotin tracer provided as 0.5 mL liquid- **STORE** refrigerated only.

**STANDARD:** Provided as 1.0 ug or 2.0 ug ( see vial) of recombinant Human BMP-2. Quick-spin and reconstitute in 50 uL of sterile water **containing BSA (50 ug BSA per 1 ug protein)** (pH 7.2). Further dilutions can be made in 0.05% Tween-20, 0.1% BSA in PBS.

**DEVELOPING REAGENTS:** Supplied with catalog # ending in "CKC".

- ELISA Coating/ Blocking Reagent ( EA150C) 50.0 mL ( 5X Solution)
- Streptavidin-HRP ( S100180C) 0.5 mL - store @ -20 Deg. C.
- TMB Substrate Solutions - Part A and Part B ( 50.0 mL each) cat # ES200C
- WASH Buffer (20X)-Dilute 1 part with 19 parts distilled water

**HANDLING/ STORAGE:** Reconstitute reagents when ready to build ELISA assay. Antibodies (Capture and Tracer) can be stored for approximately one month at 4 Degrees C. Or store **frozen** at -20 Degrees C. for up to 6 months.

Biotin tracer provided as 0.5 mL liquid- STORE refrigerated only.

Standard ( rec. BMP-2) can be stored in liquid state ( @ 4 Deg. C.) For up to one week, or store **frozen, with addition of 0.1% BSA**, at -20 Deg. C. for up to 2 months. AVOID repeat freeze-thaw.

**MATERIALS RECOMMENDED:**

ELISA Microplates: Nunc Maxisorp, Prod. # 4420404  
Tween -20.

BSA

Streptavidin-HRP: ANTIGENIX Cat no. **S100180** or similar

TMB Substrate : ANTIGENIX cat # **ES200** or similar

Dubelco's PBS (10X)

ANTIGENIX **ELISA Coating Stabilizer** ( cat no: **EA150**)

**RECOMMENDED SOLUTIONS:**

see **ANTIGENIX Developing reagents above.**

PBS: Dilute to 1XPBS in sterile water

WASH BUFFER: ANTIGENIX **WB200** or 0.05% Tween-20 in PBS.

BLOCK BUFFER: **use ANTIGENIX AMERICA coating stabilizer (EA150) or 1% BSA** in PBS

Substrate Solution: TMB Substrate Solution ( cat # ES200)

Diluent: 0.05% Tween-20, 0.1% BSA in PBS

2N Sulfuric acid (stop solution).

**PLATE PREPARATION:**

1. Dilute **portion** of capture antibody with 0.05M Carbonate buffer (or PBS) to concentration **1.0 ug/mL**.

Immediately add 100 uL to each ELISA well. Seal the plate and incubate overnight at room temperature.

2. Aspirate wells to remove all liquid and wash **4 times** using 300 uL of wash buffer per well. After last wash, add 200 uL ANTIGENIX AMERICA **ELISA coating stabilizer - recommended! (cat # EA150)** and incubate for 60 minutes at room temperature. ( With coating stabilizer, DO NOT let plate dry prior to use of coating stabilizer. This will **stabilize and Block in one step!** Refer to data sheet EA150 for complete description of use.
3. With ANTIGENIX coating stabilizer ( **recommended** ) aspirate plate but **DO NOT WASH**. For extended storage- dry plate in humidity controlled chamber or similar.

( see data sheet EA150). With standard block reagent, aspirate plate and wash 3X with 300 uL wash buffer.

**PROTOCOL:**

**STANDARD/SAMPLE:** Dilute **a portion of the** standard ( store unused standard in aliquots, high concentration, frozen -20 Deg. C.) from **2.0 ng/mL** to zero in diluent (serial dilution). Immediately add 100 uL of standard or sample to each well in duplicate. Incubate at room temp. for approx. 2 hours.

**DETECTION:** Aspirate and wash plate 4 times. Dilute portion of detection (Biotin Tracer) antibody in diluent to concentration of **0.20 ug/mL**. (Approx. **1:250** from 50.0 ug/mL) Add 100 uL per well. Incubate at room temperature for 1-2 hours. Note: detection antibody can be used in approximate range of 0.10 - 0.50 ug/mL, you may need to optimize for subsequent plates.

**STREPTAVIDIN-HRP:** Aspirate and wash plate 4 times. Dilute Streptavidin-HRP conjugate approx. **1:2,000** in diluent ( follow recommended dilution of manufacturer). (May need to optimize) Add 100 uL per well, incubate 30 minutes at room temperature.

**SUBSTRATE:** Aspirate and wash plate 4 times. Add 100 uL substrate solution to each well (follow directions for substrate preparation and handling from manufacturer's data sheet). Incubate at room temp. for color development. Monitor color development ( blue color) with plate reader at 650 nm wavelength. . **Stop** the color reaction after **10 - 20 minutes** by adding 100 uL of 2N Sulfuric acid to each well. **Read plate** at **450 nm** ( correction @ 650 nm), after reaction is stopped.

NOTE: reliable standard curves are obtained when O.D. readings do not exceed 0.25 units for the zero standard concentration, or 2.0 units for the highest standard concentration.

**X-REACTIVITY DATA:**

**Minimal** ( 10%) X reactivity was observed @ 40-50 ng/mL with following factors: Human BMP-4

**No** X-reactivity was observed with following factors:

Human: BMP-3; BMP-6; BMP-7; BMP-13; CTGF; Activin A; WNT-1; CTGFL; Follistatin; Noggin; TGF beta 1 and 2; Myostatin; GDF-3

**RESEARCH USE ONLY -NOT For DIAGNOSTIC USE**