

Primary Ab MMP13 abcam (ab39012) rabbit 1:50 (1:75, 1:100 works also!)

Negative Control: rabbit IgG ab172730 1.2ul in 100ul

**all instructions are done in standard staining dish unless otherwise noted*

**samples should be fully covered w/ solution during all incubations in humid chamber*

Day 1: ~3hrs

- 1) warm water bath to 60°C
- 2) Dewax & rehydrate slides
 - a. 63°C 5 mins
 - b. Citra-Solv wash 5 mins (3X)
 - c. 100% EtOH wash 12 slow dips (2X)
 - d. 95% EtOH wash 12 slow dips (2X)
 - e. 70% EtOH wash 12 slow dips
 - f. ddH₂O wash 12 dips or 3 mins (2X)
- 3) **Unitrieve** 60°C 30 mins in *coplin jar*
- 4) rinse in water 3 mins (2X)
- 5) fresh **3% H₂O₂** incubate RT 10 minutes in *coplin jar*
- 6) rinse in water 3 mins (2X)
- 7) block w/ **Innovex Kit Fc-block** RT for 45 mins (*in humid chamber*)
- 8) rinse in ddH₂O 2 quick change
- 9) block w/ **Innovex Kit Background Buster** RT for 45 mins (*in humid chamber*)
- 10) rinse in ddH₂O 2 quick change
- 11) Primary AB in PBS (~50-70ul per sample) RT for 1hr or O/N 4°C (for controls- use PBS) (*in humid chamber*)

Day 2: ~2hrs

- 1) PBS wash 5-10 mins (3X)
- 2) Incubate w/ **Innovex Kit Secondary Linking Ab** at RT for 10 mins (*in humid chamber*)
- 3) PBS wash 5-10 mins (3X)
- 4) Incubate w/ **Innovex Kit HRP-enzyme** incubate RT for 10 mins (*in humid chamber*)
- 5) PBS wash 5-10 mins (3X)
- 6) fresh **DAB working solution** incubate RT for 5 mins (*in humid chamber*)
- 7) Rinse in PBS 3 quick washes
- 8) Mount with **Advantage Mounting Media**

Unitrieve (Innovex Biosciences- NB325)

Innovex Animal IHC kit (Innovex Biosciences- 329ANK)

-kit includes: Fc-block, Background Buster, Secondary Linking Ab, HRP-enzyme, DAB substrate buffer, DAB

Advantage Mounting Media (Innovex Biosciences- NB300)

DAB working solution: (time sensitive)

1 ml DAB substrate buffer
1 drop DAB

3% hydrogen peroxide (H₂O₂) (50ml):

1.5 ml H₂O₂ (30% stock solution)
48.5 ml H₂O

References:

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K.S., and Alliston, T. (2017). Osteocyte-Intrinsic TGF-beta Signaling Regulates Bone Quality through Perilacunar/Canalicular Remodeling. *Cell Reports* 21, 2685-2596.

Fowler, T.W., Acevedo, C., Mazur, C.M., Hall-Glenn, F., Fields, A.J., Bale, H.A., Ritchie, R.O., Lotz, J.C., Vail, T.P., and Alliston, T. (2017). Glucocorticoid suppression of osteocyte perilacunar remodeling is associated with subchondral bone degeneration in osteonecrosis. *Sci. Rep.* 7, 44618