



## Product Information Sheet

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### Human Emmprin ELISA Kit

**Catalog No.** EK0751  
**Size** 96T  
**Range** 31.2pg/ml-2000pg/ml  
**Sensitivity** < 2pg/ml

**Specificity**

No detectable cross-reactivity with any other protein.

**Storage**

Store at 4°C for frequent use, at -20°C for infrequent use.

Avoid multiple freeze-thaw cycles (Shipped with wet ice.)

**Expiration**

Four months at 4°C and eight months at -20°C.

**Application**

For quantitative detection of human Emmprin in tissue lysates or cell culture supernates. The significance of detection in sera, plasma, body fluids is undetermined.

**Principle**

Human Emmprin ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. Human Emmprin specific-specific polyclonal antibodies were precoated onto 96-well plates. The human specific detection monoclonal antibodies were biotinylated. The test samples and biotinylated detection antibodies were added to the wells subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Emmprin amount of sample captured in plate.

**Kit Components**

1. Lyophilized recombinant human Emmprin standard: 10ng/tubex2.
2. One 96-well plate precoated with anti- human Emmprin antibody.
3. Sample diluent buffer: 30 ml
4. Biotinylated anti- human Emmprin antibody: 130µl, dilution 1:100.
5. Antibody diluent buffer: 12ml.
6. Avidin-Biotin-Peroxidase Complex (ABC): 130µl, dilution 1:100.
7. ABC diluent buffer: 12ml.
8. TMB color developing agent: 10ml.
9. TMB stop solution: 10ml.

**Material Required But Not Provided**

1. Microplate reader in standard size and Automated plate washer.
2. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended if there is a large amount of samples.
3. Clean tubes and Eppendorf tubes.
4. Washing buffer (neutral PBS or TBS).

Preparation of 0.01M **TBS**: Add 1.2g Tris, 8.5g NaCl; 450µl of purified acetic acid or 700µl of concentrated hydrochloric acid to 1000ml H<sub>2</sub>O and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

Preparation of 0.01 M **PBS**: Add 8.5g sodium chloride, 1.4g Na<sub>2</sub>HPO<sub>4</sub> and 0.2g NaH<sub>2</sub>PO<sub>4</sub> to 1000ml distilled water and adjust pH to 7.2-7.6. Finally, adjust the total volume to 1L.

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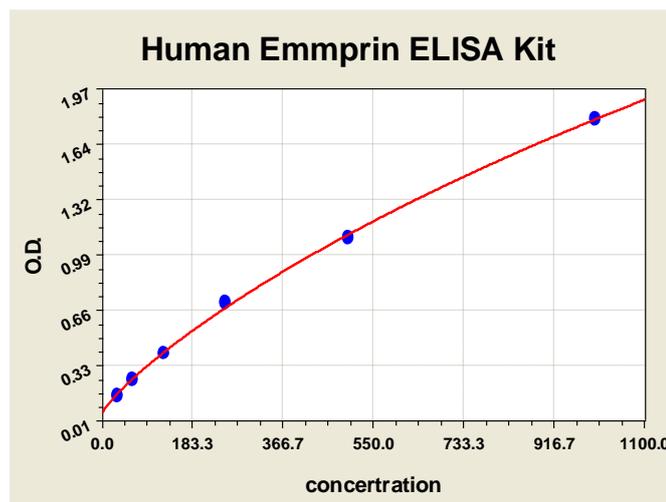
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## Notice for Application of Kit

1. Before using Kit, spin tubes and bring down all components to bottom of tube.
2. Duplicate well assay was recommended for both standard and sample testing.
3. Don't let 96-well plate dry, dry plate will inactivate active components on plate.
4. In order to avoid marginal effect of plate incubation due to temperature difference (reaction may be stronger in the marginal wells), it is suggested that the diluted ABC and TMB solution will be pre-warmed in 37°C for 30 min before using.

## Human Emmprin ELISA Kit-1X96 Well Plate Image



## Background

Basigin is a member of the immunoglobulin superfamily that is also known as EMMPRIN, short for *extracellular matrix metalloproteinase inducer*, and recently has been designated CD147 (cluster of differentiation 147).<sup>[1][2]</sup> It is a member of the immunoglobulin superfamily, with a structure related to the putative primordial form of the family. As members of the immunoglobulin superfamily play fundamental roles in intercellular recognition involved in various immunologic phenomena, differentiation, and development, basigin is thought also to play a role in intercellular recognition (Miyachi et al., 1991; Kanekura et al., 1991). This protein is a determinant for the Ok blood group system. Basigin is a type I integral membrane receptor that has many ligands, including the cyclophilin (CyP) proteins Cyp-A and CyP-B and certain integrins.<sup>[3][4][5]</sup> It is expressed by many cell types, including epithelial cells, endothelial cells and leukocytes. The standard product used in this kit is recombinant human Emmprin, A22-H205—47.4KDa.

## Reference

1. <sup>^</sup> Kasinrerker W, Fiebiger E, Stefanová I, Baumruker T, Knapp W, Stockinger H (1992). "Human leukocyte activation antigen M6, a member of the Ig superfamily, is the species homologue of rat OX-47, mouse basigin, and chicken HT7 molecule". *J Immunol* **149** (3): 847–54.
2. <sup>^</sup> [a](#) [b](#) [c](#) Yurchenko V, Constant S, Bukrinsky M (2006). "[Dealing with the family: CD147 interactions with cyclophilins](#)". *Immunology* **117** (3): 301–9
3. <sup>^</sup> Yurchenko V, Zybarth G, O'Connor M, Dai W, Franchin G, Hao T, Guo H, Hung H, Toole B, Gally P, Sherry B, Bukrinsky M (2002). "Active site residues of cyclophilin A are crucial for its signaling activity via CD147". *J Biol Chem* **277** (25): 22959–65..
4. <sup>^</sup> Yurchenko V, O'Connor M, Dai W, Guo H, Toole B, Sherry B, Bukrinsky M (2001). "CD147 is a signaling receptor for cyclophilin B". *Biochem Biophys Res Commun* **288** (4): 786–8..
5. <sup>^</sup> Berditchevski F, Chang S, Bodorova J, Hemler M (1997). "Generation of monoclonal antibodies to integrin-associated proteins. Evidence that alpha3beta1 complexes with EMMPRIN/basigin/OX47/M6". *J Biol Chem* **272** (46): 29174–80..

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