**A novel human MrgX2-ELISA kit to diagnose chronic urticaria**

Yuanyuan Dinga, Tao Zhanga, Rui Liua, Delu Chea, Nan Wanga, Langchong Hea\*

*a College of Pharmacy, Xi’an Jiaotong University, Xi'an710061 China.*

\*Corresponding author

Langchong He, Xi’an Jiaotong University, Yanta West Road, Xi’an 710061, China

Tel.: +86-29-82656788; Fax: +86-29-82655451

E-mail: helc@mail.xjtu.edu.cn

**Supplemental Tables:**

Table S1 Detection line, quantitative limit, linear range and accuracy

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Validation  criterion | LOD  ng/mL | LOQ  ng/mL | Linearity range  ng/mL | Accuracy  % Recovery |
| MrgX2 | 3.125 | 6.25 | 3.125-200 | 92.37-108.0% |

Table S2 Inter-Assay and Intra-Assay Precision

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Validation  criterion | Precision | | | | | | |
| Inter-day (n = 5) | | |  | Intra-day (n = 5) | | |
| 25  ng/mL | 50  ng/mL | 100 ng/mL |  | 25  ng/mL | 50  ng/mL | 100 ng/mL |
| MrgX2 | 11.88% | 10.82% | 8.984% |  | 1.885% | 9.163% | 4.966% |

Table S3 MrgX2 concentrations for groups of healthy individuals and CU individualsa

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Group | n | 25th percentile | Median | 75th  percentile |
| Healthy individuals | 75 | 50.11 | 60.00 | 66.80 |
| CU individuals | 75 | 82.42 | 95.62 | 109.43 |

a For each group of individuals or CU studied, the median, 25th percentile, 75th percentile, and interquartile range were determined.

Table S4 Comparisons of MrgX2 concentrations between respective groups of healthy individuals and CU individualsa

|  |  |
| --- | --- |
| Group | *p* |
| CU individuals (n= 75) vs healthy individuals (n = 75) | <0.0001 |
| healthy men (n=31) vs healthy women (n=44) | 0.1039 |
| CU men (n=31) vs CU women (n=44) | 0.7892 |

a Comparisons of MrgX2 concentrations between healthy individuals and CU individuals were performed by using a nonparametric t test.