

## Seka-Gen Biotech

### VENOM ANALYSIS RESULTS

**Sample sent by:** Sanliurfa Akrep ve Yılan Zehiri Üretimi İlaç San Tic. Ltd. Şti.

**Sample Delivery Date:** 10.03.2026

**Sample Information:** Scorpion Venom, *Androctonus turkiyensis* (Species determination was made by Prof. Dr. Ersen Aydın YAĞMUR), Supplied in liquid form, white color.

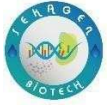
**Sample Purity:** %100

**Analysis Date:** 10.03.2026

**Analyzes Performed:** UV-visible Spectrophotometric Analysis, SDS-PAGE and HPLC

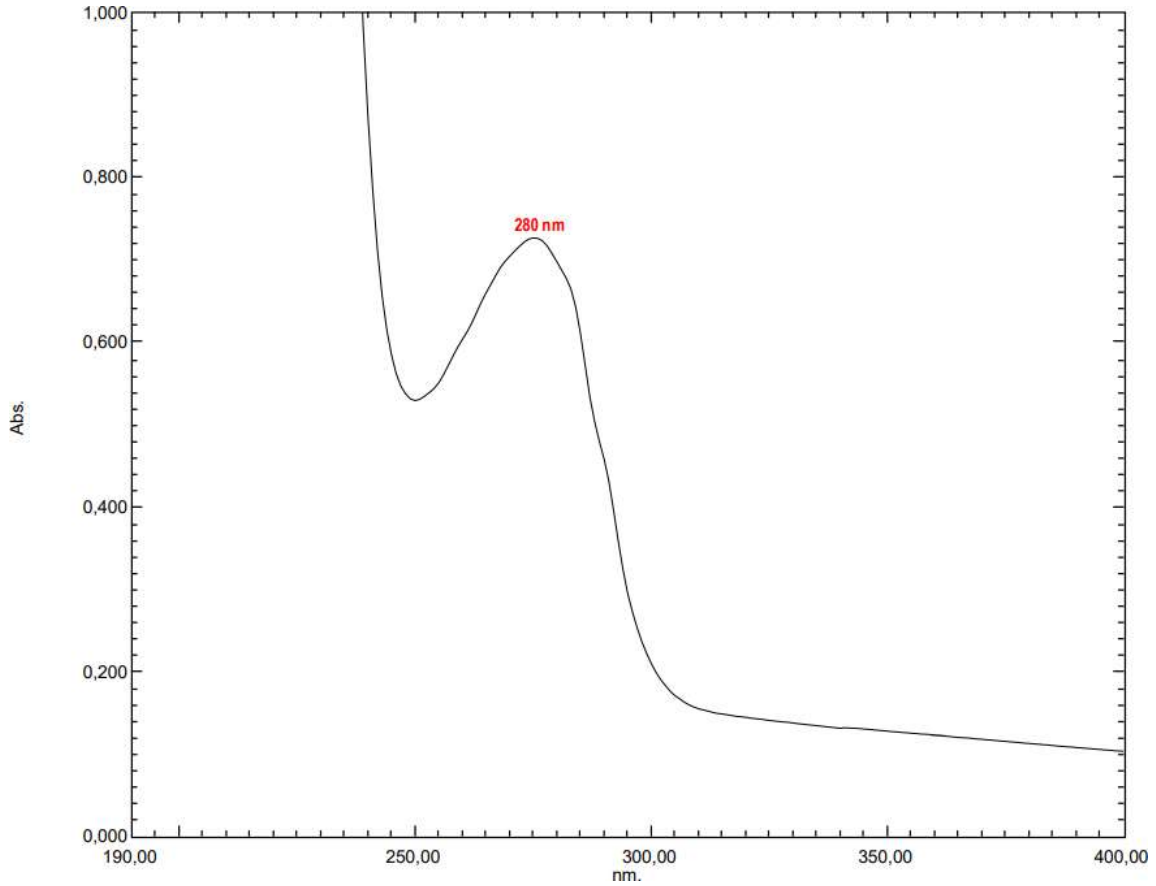
### Preparation Studies

Venom belonging to the *Androctonus turkiyensis* scorpion species, supplied in liquid white form, was first purified with saline-containing water. In order to remove excess water from the venom structure, it was subjected to lyophilization process. Pure white powdered venom was obtained.

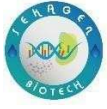


## SpectrumResults

Spectra analysis of venom obtained from *Androctonus turkiyensis* species scorpion prepared as 1 mg/mL was performed using Shimadzu brand UV-1900i model spectrophotometer device. Spectrum scanning was performed between 190 nm - 400 nm wavelengths. A venom-specific maximum peak was observed at 280 nm (**Figure 1**). For this reason, HPLC analyzes were measured based on 280 nm.

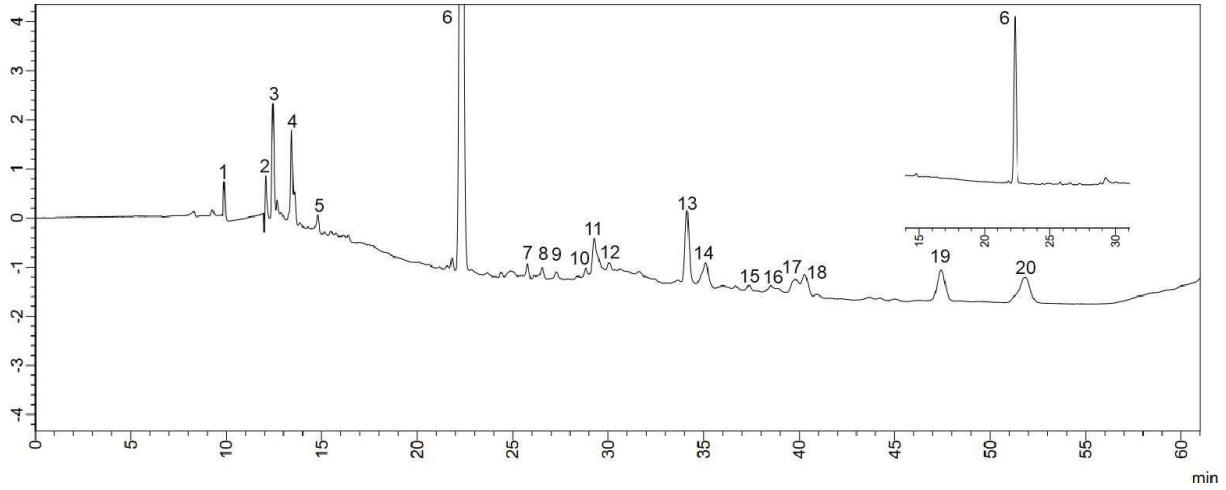


**Figure 1** Spectrum analysis of *Androctonus turkiyensis* venom



## HPLC Analysis

Powdered venoms were loaded into the HPLC (High Performance Liquid Chromatography) instrument at a concentration of 1000 ppm. In Shimadzu Prominence-i LC2030 3D HPLC device, Solvent B was made in a 0-60% low gradient program with a flow rate of 1 mg/mL. The spectrum was taken to determine the maximum absorbance of the proteins in the venom. In line with these results, HPLC analysis was performed at 280 nm wavelength. Proteins in the venom were detected in fractions at different times (**Figure 2**). As a result of HPLC analysis, 20 different proteins/peptides were determined in the venom of *Androctonus turkiyensis*. The retention time of the fractions was indicated (**Table 1**).



**Figure 2.** HPLC Analysis result of *Androctonus turkiyensis* venom.

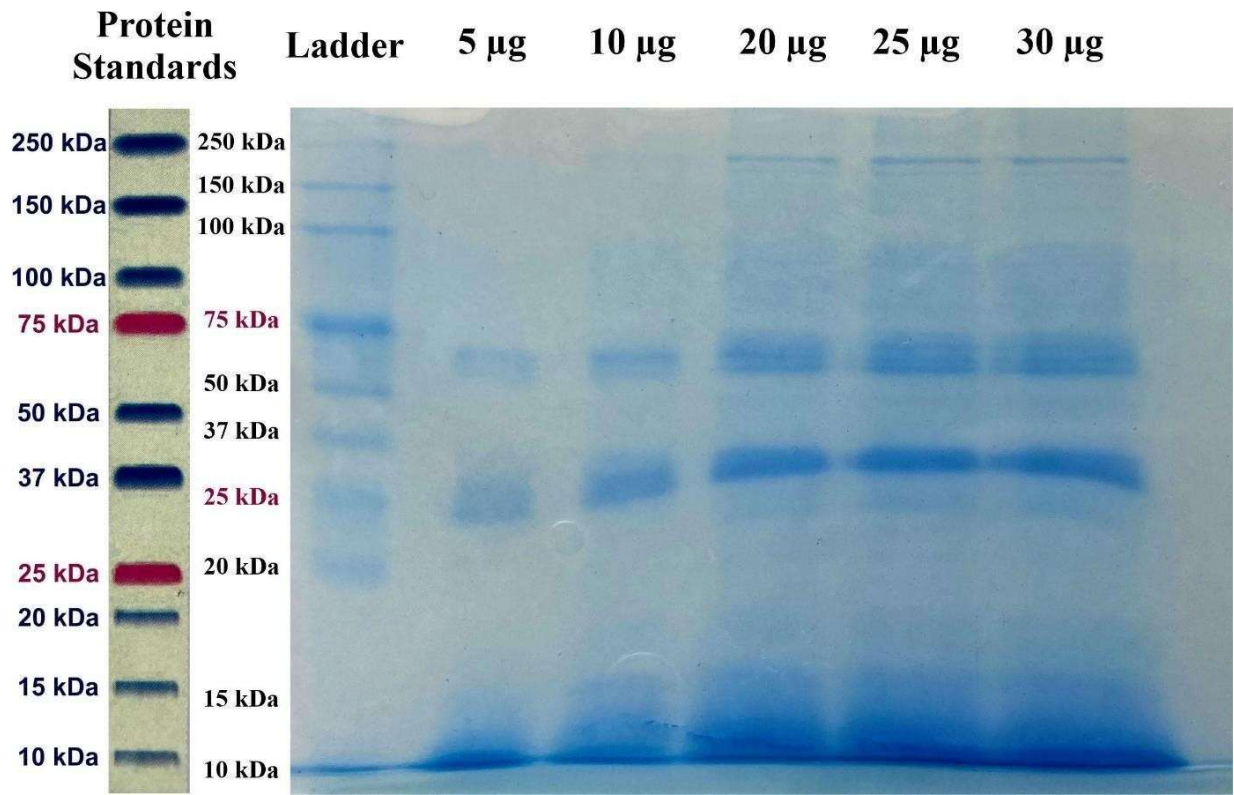
**Table 1.** Retention times of fractions of *Androctonus turkiyensis* venom

| Fraksiyon Sayısı | Tutunma Süresi (Dakika) | Fraksiyon Sayısı | Tutunma Süresi (Dakika) |
|------------------|-------------------------|------------------|-------------------------|
| 1                | 9.27                    | 11               | 29.26                   |
| 2                | 12.05                   | 12               | 30.04                   |
| 3                | 12.43                   | 13               | 34.12                   |
| 4                | 12.65                   | 14               | 34.86                   |
| 5                | 14.96                   | 15               | 36.14                   |
| 6                | 22.31                   | 16               | 38.21                   |
| 7                | 25.77                   | 17               | 40.28                   |
| 8                | 26.53                   | 18               | 40.98                   |
| 9                | 27.29                   | 19               | 47.43                   |
| 10               | 28.83                   | 20               | 51.82                   |



### SDS-PAGE Analysis

Electrophoretic separation of *Androctonus turkiyensis* venom was performed with a vertical electrophoresis system consisting of 4-12% acrylamide under reducing conditions. **Lane 1:** molecular weight standard (range 10-250 kDa), **Lane 2:** 5 µg *Androctonus turkiyensis* venom, **Lane 3:** 10 µg *Androctonus turkiyensis* venom, **Lane 4:** 20 µg *Androctonus turkiyensis* venom, **Lane 5:** 25 µg *Androctonus turkiyensis* venom, **Lane 6:** 30 µg *Androctonus turkiyensis* venom. Marks indicated on the left are expressed in kDa. The gel was stained using Coomassie blue. After SDS-PAGE analysis, the presence of proteins of different sizes was detected in the venom of *Androctonus turkiyensis*.



**Figure 3** SDS-PAGE analyses and *Androctonus turkiyensis* venom profiles.

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