

## Beta-toxin Tz1 Protein, Tityus zulianus, Recombinant (His & Myc)

### General Information

Synonyms:	Beta-toxin Tz1;PT-beta NaTx14.1
Protein Construction:	21-84 aa
Species:	Tityus zulianus
Expression Host:	E. coli
Accession:	Q2NME3
Molecular Weight:	14.8 kDa (predicted)
AA Sequence:	KDGYLVGNDGCKYSCFTRPGTYCANECRSRVKKGKDGICYAWMACYCYSPNWWKTWDRATNRCGR

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Beta toxins bind voltage-independently at site-4 of sodium channels (Nav) and shift the voltage of activation toward more negative potentials thereby affecting sodium channel activation and promoting spontaneous and repetitive firing. Strongly affects skeletal muscle channels Nav1.4/SCN4A, poorly affects the neuronal channels Nav1.6/SCN8A and Nav1.2/SCN2A. Induces spastic paralysis of rear limbs, increased salivation, apnea, tachycardia and increased perspiration.

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