

## CERTIFICATE OF ANALYSIS

DSIP Batch OP-DS409 January 2026

|                     |                                                    |                   |                                                        |
|---------------------|----------------------------------------------------|-------------------|--------------------------------------------------------|
| Product name        | DSIP                                               | Molecular formula | $C_{35}H_{48}N_{10}O_{15}$                             |
| Batch number        | OP-DS409                                           | Molecular weight  | 848.82 g/mol                                           |
| CAS number          | 62568-57-4                                         | Quantity          | 5 mg                                                   |
| Date of manufacture | January 2026                                       | PubChem CID       | 68816                                                  |
| Storage             | Powder: -20°C 3 years; 4°C 2 years; 15°C 3 months. |                   | In solvent: -80°C 6 months; -20°C 1 month; 10°C 1 week |

## Amino acid sequence

WAGGDASGE (Delta sleep-inducing peptide)

9 residues

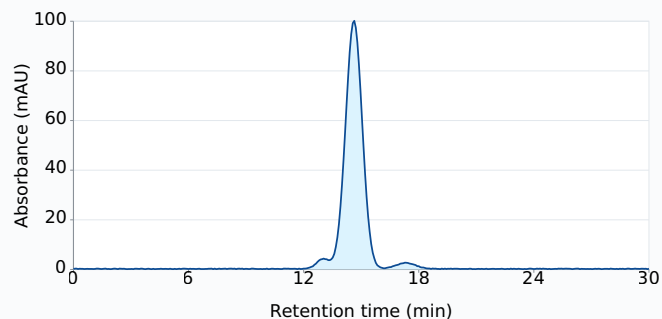
## Analytical results

| Test parameter                  | Method                    | Specification             | Result         | Status |
|---------------------------------|---------------------------|---------------------------|----------------|--------|
| Appearance                      | Visual                    | White to off-white powder | Conforms       | ✓      |
| Peptide purity                  | RP-HPLC (C18)             | ≥ 98.5%                   | 99.10%         | ✓      |
| Molecular weight confirmation   | ESI-MS                    | 848.82 ± 1.0 Da           | Conforms       | ✓      |
| Water content                   | Karl Fischer              | ≤ 10.0%                   | 4.4%           | ✓      |
| Acetate content                 | HPLC                      | ≤ 15.0%                   | 7.9% (acetate) | ✓      |
| Total related substances        | RP-HPLC                   | ≤ 2.0%                    | 0.90%          | ✓      |
| Largest single impurity         | RP-HPLC                   | ≤ 1.0%                    | 0.40%          | ✓      |
| Residual solvent — Acetonitrile | GC-HS                     | ≤ 410 ppm                 | < 410 ppm      | ✓      |
| Residual solvent — DCM          | GC-HS                     | ≤ 600 ppm                 | < 600 ppm      | ✓      |
| Residual solvent — DMF          | GC-HS                     | ≤ 880 ppm                 | < 880 ppm      | ✓      |
| Bacterial endotoxins            | LAL kinetic turbidimetric | < 5 EU/mg                 | < 0.5 EU/mg    | ✓      |
| Bioburden                       | USP <61>                  | < 100 CFU/g (USP <61>)    | < 10 CFU/g     | ✓      |

## HPLC chromatogram

RP-HPLC C18

UV detection at 220 nm — gradient 10–70% ACN in 0.1% TFA over 30 min — flow 1.0 mL/min

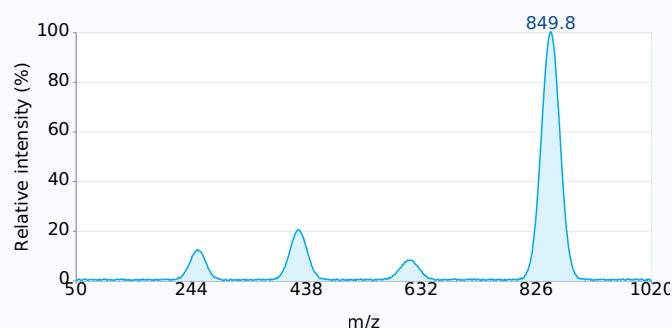


Main peak RT 14.62 min · Area 99.10% · Largest imp 0.40% · Total related 0.90%

## Mass spectrum

ESI-MS positive

Electrospray ionisation — positive mode

Observed  $[M+H]^+$  849.8 · MW 848.82 g/mol

✓ Overall result: Conforms to specification

Results relate only to the batch tested, by the stated methods at time of release, and are provided in good faith without warranty — OP Labs does not guarantee the accuracy or completeness of the results. Storage figures are recommendations, not stability data. Research use only.