

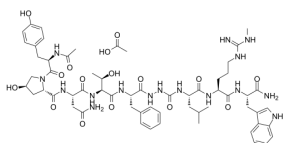
## Certificate of Analysis

**Product Name:** TAK-448 (acetate)  
**Cat. No.:** HY-P0076A  
**CAS No.:** 1470374-22-1  
**Batch No.:** 42261  
**Chemical Name:** L-Tryptophanamide, N-acetyl-D-tyrosyl-(4R)-4-hydroxy-L-prolyl-L-asparaginyl-L-threonyl-L-phenylalanyl-2-azaglycyl-L-leucyl-N5-[imino(methylamino)methyl]-L-ornithyl-, acetate (1:1)

### PHYSICAL AND CHEMICAL PROPERTIES

**Molecular Formula:** C<sub>60</sub>H<sub>84</sub>N<sub>16</sub>O<sub>16</sub>  
**Molecular Weight:** 1285.41  
**Storage:**  
Powder      -80°C      2 years  
                  -20°C      1 year  
In solvent   -80°C      6 months  
                  -20°C      1 month

**Chemical Structure:**



### ANALYTICAL DATA

**Appearance:** White to off-white (Solid)  
**LCMS:** Consistent with structure  
**Purity (LCMS):** 99.37%  
**Conclusion:** The product has been tested and complies with the given specifications.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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