

## Antifreeze Polypeptide 6 (winter flounder)

Cat. No.:	HY-P3832
CAS No.:	122604-16-4
Molecular Formula:	C <sub>133</sub> H <sub>225</sub> N <sub>43</sub> O <sub>51</sub>
Molecular Weight:	3242.47
Sequence Shortening:	DTASDAAAAAALTAANAKAAAELTAANAAAAAATAR
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

### BIOLOGICAL ACTIVITY

<b>Description</b>	Antifreeze Polypeptide 6 (winter flounder) is the component 6 of the winter flounder's antifreeze polypeptides. Antifreeze Polypeptide 6 (winter flounder) lowers the plasma freezing point by arresting the growth of ice nuclei <sup>[1]</sup> .
<b>In Vitro</b>	Antifreeze Polypeptide 6 (winter flounder) inhibits the growth of ice crystals by hydrogen bonding of Thr, Asn, and Asp side chains in a specific pattern to the hexagonal bipyramidal planes of ice. This mode of binding is unidirectional, maximizing opportunities for packing of AFPs on the ice surface, and that ice crystal growth inhibition occurs by a two-step mechanism involving hydrogen bonding and hydrophobic interpeptide interactions <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

[1]. Wen D, et al. A model for binding of an antifreeze polypeptide to ice. Biophys J. 1992 Dec;63(6):1659-62.

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

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