



## DATASHEET

Orexin B (mouse)

### Product overview

|                               |                                                                                                                                                                                                                                                            |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>                   | Orexin B (mouse)                                                                                                                                                                                                                                           |
| <b>Cat No</b>                 | HB5324                                                                                                                                                                                                                                                     |
| <b>Biological description</b> | Excitatory neuropeptide at orexin receptors ( $K_i$ values are 420 and 36 nM for $OX_1$ and $OX_2$ receptors respectively). Orexin B is involved in a many physiological functions (such as feeding regulation, sleep-wake cycle, energy metabolism etc.). |
| <b>Alternative names</b>      | Hypocretin-2                                                                                                                                                                                                                                               |
| <b>Biological action</b>      | Peptide                                                                                                                                                                                                                                                    |
| <b>Purity</b>                 | >95%                                                                                                                                                                                                                                                       |
| <b>Description</b>            | Mouse excitatory neuropeptide at orexin $OX_1/OX_2$ receptors                                                                                                                                                                                              |

### Solubility & Handling

|                             |                                                                                                                                                                                                        |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage instructions</b> | -20 °C                                                                                                                                                                                                 |
| <b>Solubility overview</b>  | Soluble in water (1 mg/ml)                                                                                                                                                                             |
| <b>Storage of solutions</b> | Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use. |
| <b>Shipping Conditions</b>  | Stable for <b>ambient temperature</b> shipping. Follow storage instructions on receipt.                                                                                                                |
| <b>Important</b>            | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use                                                                           |

### Chemical Data

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chemical name</b>         | RPGLPGLQGRLLQANGNHAAGILTM (modifications: Met-28 = C-terminal amide)                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Molecular Weight</b>      | 2936.43                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Chemical structure</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Molecular Formula</b>     | $C_{126}H_{215}N_{45}O_{34}S$                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Sequence (one letter)</b> | RPGLPGLQGRLLQANGNHAAGILTM                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Modifications</b>         | Met-28 = C-terminal amide                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>CAS Number</b>            | 202801-92-1                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>PubChem identifier</b>    | 90479795                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>SMILES</b>                | <chem>CC[C@H](C)[C@@H](C(=O)N[C@@H](CC(C)C)C(=O)N[C@@H]([C@@H](C)O)C(=O)N[C@@H](CCSC)C(=O)N)NC(=O)CNC(=O)[C@H](C)NC(=O)[C@H](C)NC(=O)[C@H](CC1=CNC=N1)NC(=O)[C@H](CC(=O)N)NC(=O)CNC(=O)[C@H](CC(=O)N)NC(=O)[C@H](C)NC(=O)[C@H](CCC(=O)N)NC(=O)[C@H](CC(C)C)NC(=O)[C@H](CC(C)C)NC(=O)[C@H](CCCNC(=N)N)NC(=O)CNC(=O)[C@H](CCC(=O)N)NC(=O)[C@H](CC(C)C)NC(=O)CNC(=O)[C@@H]2CCCNC2C(=O)[C@@H]3CCCN3C(=O)CNC(=O)[C@@H]4CCCN4C(=O)[C@H](CCCNC(=N)N)N</chem> |
| <b>InChiKey</b>              | RLVZFBVFVDDPQ-GWQFQBPSA-N                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>MDL number</b>            | MFCD01635376                                                                                                                                                                                                                                                                                                                                                                                                                                          |

### References

The sleep-modulating peptide orexin-B protects midbrain dopamine neurons from degeneration, alone or in cooperation with nicotine.

Guerreiro et al (2015) Mol Pharmacol. 87(3)

**PubMedID** [25552485](#)

## **Orexin/hypocretin: a neuropeptide at the interface of sleep, energy homeostasis, and reward system.**

Tsujino et al (2009) Pharmacol Rev 61(2)

**PubMedID** [19549926](#)

## **Orexin System: The Key for a Healthy Life.**

Chieffi et al (2017) Front Physiol 31;8

**PubMedID** [28620314](#)

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