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Type VII RTKs: Neurotrophin receptor/Trk family in GtoPdb v.2025.3

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Abstract

The neurotrophin receptor family of RTKs include tropomyosin-related kinase (Trk) receptors TrkA, TrkB and TrkC. Their cognate ligands are NGF, BDNF and neurotrophin-3, respectively. They are associated primarily with proliferative and migration effects in neural systems. Various isoforms of neurotrophin receptors exist, including truncated forms of TrkB and TrkC, which lack catalytic domains. p75 (TNFRSF16, also known as nerve growth factor receptor) can interact with neurotrophins and their propeptides. While p75 can lead to apoptosis, it can also form a complex with Trk receptors to mediate survival signalling [10].

Contents

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Database links

Type VII RTKs: Neurotrophin receptor/Trk family
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=326

Receptors

- TrkA(neurotrophic receptor tyrosine kinase 1)
  https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1817
- TrkB(neurotrophic receptor tyrosine kinase 2)
  https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1818
- TrkC(neurotrophic receptor tyrosine kinase 3)
  https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=1819

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