

Prokineticin-2 (PKR2) Receptor (Human, Recombinant)

Catalog number: RBHPK2M400UA

Background

The human Prokineticin-2 receptor, also named GPR73L1, GPR73b and I5E, was cloned in 2002 from a pooled testis and fetal brain cDNA library (Lin *et al.*). In the same year, tissue distribution studies of this receptor were performed by Soga *et al.*, showing a very high level in the fetal brain. The two groups also cloned the human Prokineticin-1 receptor, which shares 85% overall sequence identity with the PKR2 receptor. Prokineticin-2 is the endogenous agonist acting on this receptor. As this peptide is known to stimulate the contraction of gastrointestinal smooth muscle, novel therapeutic agents to treat disorders involving impaired gastrointestinal motility could be developed (Li *et al.*, 2000). Levels of this peptide are also known to be modulated by the circadian clock and could therefore be involved in sleep troubles (Cheng *et al.*, 2002). The PKR2 receptor mobilizes calcium in an pertussis toxin insensitive manner, suggesting that this receptor couple exclusively to Gq rather than to Gi/o (Lin *et al.*, 2002).

Therapeutic relevance

Experiments performed on guinea pig gastrointestinal smooth muscle with the PKR2 agonist suggested that the PKR2 receptor could be involved in many disorders, including irritable bowel syndrome, diabetic gastroparesis, postoperative ileus, chronic constipation and gastroesophageal reflux disease (Li *et al.*, 2000). Experiments on rats' circadian rhythm, have also demonstrated that the Prokineticin-2 receptor might be involved in sleep disorders (Cheng *et al.*, 2002). Finally, ligands of this family were shown to act as mitogens by stimulating angiogenesis in reproductive tissues (LeCouter *et al.*, 2001).

Features

- Bmax for [¹²⁵I]MIT-1 (PerkinElmer NEX410) : 0.19 pmol/mg protein
- Kd for [¹²⁵I]MIT-1 binding: 1.41 pM
- Protein Concentration: 1.5 mg/ml
- Host cell: HEK-293
- GenBank Accession Number: NM_144773

Packaging and storage

- Membranes are suspended in 50 mM Tris-HCl pH 7.4, 10% sucrose
- Available in 400 UA vials (enough for 400 assay units)
- Store at -70°C

Availability: Please contact your local PerkinElmer sales office for availability.

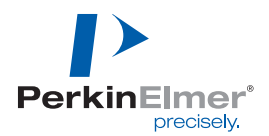
Related product

| Catalog # | Name |
|-----------|--------------------------|
| NEX410 | [¹²⁵ I]MIT-1 |

References

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Lin D.C.H. *et al.*, J. Biol. Chem. 277(22): 19276-19280 (2002)
Masuda Y. *et al.*, Biochem. Biophys. Res. Commun. 293: 396-402 (2002)
Soga T. *et al.*, Biochim. Biophys. Acta. 1579: 173-179 (2002)

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