

Recombinant Human ADA2A Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50015

Size: 10ug, 100ug

Protein Name: Alpha-2A adrenergic receptor (Alpha-2 adrenergic receptor subtype C10) (Alpha-2A adrenoreceptor) (Alpha-2A adrenoceptor) (Alpha-2AAR)

Synonym: ADRA2A, ADRA2R, ADRAR

UniProt ID: P08913

UniProt Link: www.uniprot.org/uniprotkb/P08913/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 465 AA

Molecular Weight: 51 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MFRQEQPLAEGSFAPMGSLQPDAGNASWNGTEAPGGGARATPYSLQVTLTLVCLAGLLMLLTVFG
NVLVIIAVFTSRALKAPQNLFLVSLASADILVATLVIPFSLANEVMGYWYFGKAWCEIYLALDVLFCSTSS
IVHLCALSLDRYWSITQAEYNLKRTPRRIKAIITVWVISAVISFPPLISIEKKGGGGGPQPAEPRCEIND
QKWYVISSCIGSFAPCLIMILVYVRIYQIAKRRTVPSPRRGPDVAAPPGGTERRPNGLGPERSAG
PGGAEAEPLPTQLNGAPGEPAPAGPRD DALDLEESSSSDHAERPPGPRRPERGPRGKGKARASQ
VKPGDSLPRRGPGATGIGTPAAGPGEERVGA AKASRWGRQNRKRTFVLAVVIGVFVVCWFPPF
FFTYTLTAVGCSVPRTLKFFFFWFGYCNSSLNPVIYTFNHDFRRAFKKILCRGDRKRIV

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Alpha-2A adrenergic receptor (Alpha-2 adrenergic receptor subtype C10) (Alpha-2A adrenoreceptor) (Alpha-2A adrenoceptor) (Alpha-2AAR) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Alpha-2 adrenergic receptors are G protein-coupled receptors for catecholamines that activate the G(i/o) protein pathway, thereby promoting adenylyl cyclase inhibition, ERK1/2 stimulation, and voltage-gated calcium channels suppression (PubMed:2170371, PubMed:23105096, PubMed:2568356, PubMed:35245122, PubMed:27376152). Control a variety of physiological processes, such as regulation of blood pressure, lipolysis and insulin release (PubMed:2568356, PubMed:27376152). ADRA2A and ADRA2C mediates the presynaptic feedback inhibition of neurotransmitter release from noradrenergic nerve terminals in sympathetic and central nervous systems. ADRA2A inhibits transmitter release at high stimulation frequencies, whereas ADRA2C modulates neurotransmission at lower levels of nerve activity (By similarity). The rank order of potency for agonists of ADRA2A is oxymetazoline > clonidine > epinephrine > norepinephrine > phenylephrine > dopamine > p-synephrine > p-tyramine > serotonin = p-octopamine. For antagonists, the rank order is yohimbine > phentolamine = mianserine > chlorpromazine = spiperone = prazosin > propranolol > alprenolol = pindolol (PubMed:2170371, PubMed:2568356).

Subcellular Localization: Cell membrane ; Multi-pass membrane protein .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.