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# Beta Adrenergic Receptor Gene

National Cancer Institute

## Source

National Cancer Institute. *Beta Adrenergic Receptor Gene*. NCI Thesaurus. Code C21292.

Expressed in effector tissues innervated by postganglionic sympathetic adrenergic fibers, Beta Adrenergic Receptor Genes encode Beta Adrenergic Receptors, one of two major classes of adrenergic receptors (alpha and beta) based on their reactions to norepinephrine and epinephrine, on cellular effects of receptor activation, and on relative affinities and reactions to synthetic blocking or stimulating agents. Beta-adrenergic receptors respond to blocking agents such as propranolol and to activating agents such as isoproterenol. Beta-1 type receptors mediate lipolysis and increase cardiac rate and force of contraction; beta-2 type receptor activation promotes bronchial and vascular smooth muscle relaxation. When coupled to adenylate cyclase through Gs protein, Beta Adrenergic Receptor stimulation results in increased intracellular cyclic AMP. (NCI)