

Here's a useful list of GPCRs better suited for assays using **Gα16** due to its promiscuous coupling to various receptor subtypes, particularly GPCRs that don't naturally signal via Gαq or Gαi/o clearly.

GPCR families commonly tested with Gα16:

1. GPCRs coupling via G_s (usually increasing cAMP):

- **β-Adrenergic receptors:**
 - β1 (ADRB1)
 - β2 (ADRB2)
 - β3 (ADRB3)
 - **Dopamine Receptors (G_s subtype):**
 - D1 (DRD1)
 - D5 (DRD5)
 - **Adenosine Receptors (G_s subtype):**
 - A2A (ADORA2A)
 - A2B (ADORA2B)
 - **Histamine receptors (G_s subtype):**
 - H2 (HRH2)
 - **Prostaglandin receptors (G_s subtype):**
 - EP2 receptor (PTGER2)
 - EP4 receptor (PTGER4)
 - **Vasoactive Intestinal Peptide (VIP) receptors:**
 - VPAC1
 - VPAC2
 - **Glucagon-like peptide-1 receptor (GLP1R)**
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2. GPCRs coupling via Gα12/13 pathways:

- **Lysophosphatidic acid (LPA) receptors:**
 - LPAR1–LPAR6
 - **Protease-Activated Receptors (PARs):**
 - PAR1 (F2R)
 - PAR2 (F2RL1)
 - PAR3 (F2RL2)
 - PAR4 (F2RL3)
 - **Sphingosine-1-phosphate (S1P) receptors:**
 - S1PR1–S1PR5
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3. Sensory GPCRs (taste, olfactory, orphan):

- **Taste receptors (TAS2R family)**
 - **Orphan GPCRs** (where natural G-protein coupling is unknown or unclear)
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4. GPCRs with mixed or unclear coupling (benefiting from G α 16's promiscuity):

- Many orphan GPCRs
- Recently cloned GPCRs with unknown or unclear signaling pathways
- Screening campaigns testing multiple GPCR classes simultaneously

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