BACKGROUND
Sigma Receptor, also known as opioid receptor, sigma 1 (OprS1), acts as a modulatory system influencing the analgesic activity of opioid drugs. For example, activation of the Sigma Receptor is induced during the early effects of co-caine. At the cellular level, Sigma Receptor agonists modulate intracellular calcium mobilization and extracellular calcium influx, NMDA-mediated responses and acetylcholine release. In addition, Sigma Receptor agonists alter monoaminergic systems. At the behavioral level, the Sigma Receptor is involved in learning and memory processes, response to stress, depression, neuroprotection and pharmacodependence. Pregnenolone, dehydroepiandrosterone and their sulfate esters behave as Sigma Receptor agonists, while progesterone is a potent antagonist. Sigma Receptor is expressed in the endocrine, immune and other peripheral organ systems, and is expressed in a variety of human tumors. The Sigma Receptor is responsible for the pathogenesis of some psychiatric disorders and may be involved in several diseases of the central nervous system. Opioid analgesia is influenced by many factors, including the Sigma Receptor.

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: SIGMAR1 (human) mapping to 9p13.3; Sigmar1 (mouse) mapping to 4 A5.

SOURCE
Sigma Receptor (F-5) is a mouse monoclonal antibody raised against amino acids 1-223 representing full length Sigma Receptor of human origin.

PRODUCT
Each vial contains 200 µg IgG2b in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE
Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS
Sigma Receptor (F-5) is recommended for detection of Sigma Receptor of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Sigma Receptor siRNA (h): sc-42250, Sigma Receptor siRNA (m): sc-42251, Sigma Receptor shRNA Plasmid (h): sc-42250-50, Sigma Receptor shRNA Plasmid (m): sc-42251-50, Sigma Receptor shRNA (h) Lentiviral Particles: sc-42250-V and Sigma Receptor shRNA (m) Lentiviral Particles: sc-42251-V.

Molecular Weight of Sigma Receptor: 29 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or SK-N-MC cell lysate: sc-2237.

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA

RESEARCH USE
For research use only, not for use in diagnostic procedures.