

Extracellular calcium-sensing receptor Recombinant Protein | CASR recombinant protein

Recombinant Human Extracellular calcium-sensing receptor

CATALOG # AAA113503	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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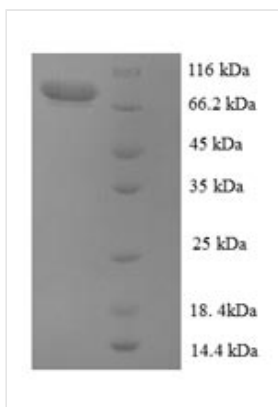
PRODUCT SYNONYMS

Extracellular calcium-sensing receptor; Recombinant Human Extracellular calcium-sensing receptor; Parathyroid cell calcium-sensing receptor 1; PCaR1; CASR recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	20-612aa; Extracellular Domain
Sequence	YGPDQRAQKK GDIILGGLFP IHFGVAAKDQ DLKSRPESVE CIRYNFRGFR WLQAMIFAIE EINSSPALLP NLTGGRIFD TCNTVSKALE ATLSFVAQNK IDSLNLDEFC NCSEHIPSTI AVVGATGSGV STAVANLLGL FYIPQVSYAS SSRLLSNKNQ FKSFLRTIPN DEHQATAMAD IIEYFRWNWV GTIAADDDYG RPGIEKFREE AEERDICIDF SELISQYSDE EEIQHVVEVI QNSTAKVIVV FSSGPDLEPL IKEIVRRNIT GKIWLASEAW ASSSLIAMPQ YFHVVGTTIG FALKAGQIPG FREFLKKVHP RKSVMNGFAK EFWEETFNCH LQEGAKGPLP VDTFLRGHEE SGDRFSNSST AFRPLCTGDE NISSVETPYI DYTHLRISYN VYLAVYSIAH ALQDIYTCLP GRGLFTNGSC ADIKKVEAWQ VLKHLRHLNF TNNMGEQVTF DECGDLVGNY SIINWHLSPD DGSIVFKEVG YYNVYAKKGE RLFINEEKIL WSGFSREVPF SNCSRDCLAG TRKGIIIEGEP TCCFECVECP DGEYSDETDA SACNKPDDF WSNENHTSCI AKEIEFLSWT EPF
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for CASR recombinant protein	Senses changes in the extracellular concentration of calcium ions. The activity of this receptor is mediated by a G-protein that activates a phosphatidylinositol-calcium second messenger system.
Product Categories/Family for CASR recombinant protein	Neuroscience

References

- Pearce S.H.S., Thakker R.V. Molecular cloning and functional expression of human parathyroid calcium receptor cDNAs. *Garrett J.E., Capuano I.V., Hammerland L.G., Hung B.C., Brown E.M., Hebert S.C., Nemeth E.F., Fuller F.J. Biol. Chem. 270:12919-12925(1995)* Molecular cloning of a putative Ca(2+) -sensing receptor cDNA from human kidney. Aida K., Koishi S., Tawata M., Onaya T. *Biochem. Biophys. Res. Commun. 214:524-529(1995)* Expression of a calcium-sensing receptor in a human medullary thyroid carcinoma cell line and its contribution to calcitonin secretion. Freichel M., Zink-Lorenz A., Holloschi A., Hafner M., Flockerzi V., Raue F. *Endocrinology 137:3842-3848(1996)* SeattleSNPs variation discovery resource Familial hypocalciuric hypercalcemia associated with mutation in the human Ca(2+) -sensing receptor gene. Aida K., Koishi S., Inoue M., Nakazato M., Tawata M., Onaya T. *J. Clin. Endocrinol. Metab. 80:2594-2598(1995)* Changes in calcium responsiveness and handling during keratinocyte differentiation. Potential role of the calcium receptor. Bikle D.D., Ratnam A., Mauro T., Harris J., Pillai S.J. *Clin. Invest. 97:1085-1093(1996)* Calcium-sensing receptor ubiquitination and degradation mediated by the E3 ubiquitin ligase dorf. Huang Y., Niwa J., Sobue G., Breitwieser G.E.J. *Biol. Chem. 281:11610-11617(2006)* Rab1 small GTP-binding protein regulates cell surface trafficking of the human calcium-sensing receptor. Zhuang X., Adipietro K.A., Datta S., Northup J.K., Ray K. *Endocrinology 151:5114-5123(2010)* Mutations in the human Ca(2+) -sensing receptor gene cause familial hypocalciuric hypercalcemia and neonatal severe hyperparathyroidism. Pollak M.R., Brown E.M., Chou Y.-H.W., Hebert S.C., Marx S.J., Steinmann B., Levi T., Seidman C.E., Seidman J.G. *Cell 75:1297-1303(1993)* Autosomal dominant hypocalcemia caused by a Ca(2+) -sensing receptor gene mutation. Pollak M.R., Brown E.M., Estep H.L., McLaine P.N., Kifor O., Hebert S.C., Seidman C.E., Seidman J.G. *Nat. Genet. 8:303-307(1994)* Mutations in the human Ca(2+) -sensing-receptor gene that cause familial hypocalciuric hypercalcemia. Chou Y.-H.W., Pollak M.R., Brandi M.L., Toss G., Arnqvist H., Atkinson A.B., Papapoulos S.E., Marx S., Brown E.M., Seidman J.G., Seidman C.E. *Am. J. Hum. Genet. 56:1075-1079(1995)* Calcium-sensing receptor mutations in familial benign hypercalcemia and neonatal hyperparathyroidism. Pearce S.H.S., Trump D., Wooding C., Besser G.M., Chew S.L., Grant D.B., Heath D.A., Hughes I.A., Paterson C.R., Whyte M.P., Thakker R.V. *J. Clin. Invest. 96:2683-2692(1995)* The Ca(2+) -sensing receptor gene (PCAR1) mutation T151M in isolated autosomal dominant hypoparathyroidism. Lovlie R., Eiken H.G., Sorheim J.I., Boman H. *Hum. Genet. 98:129-133(1996)* Mutations in the Ca(2+) -sensing receptor gene cause autosomal dominant and sporadic hypoparathyroidism. Baron J., Winer K.K., Yanovski J.A., Cunningham A.W., Laue L., Zimmerman D., Cutler G.B. Jr. *Hum. Mol. Genet. 5:601-606(1996)* A familial syndrome of hypocalcemia with hypercalciuria due to mutations in the calcium-sensing receptor. Pearce S.H.S., Williamson C., Kifor O., Bai M., Coulthard M.G., Davies M., Lewis-Barned N., McCredie D., Powell H., Kendall-Taylor P., Brown E.M., Thakker R.V. *N. Engl. J. Med. 335:1115-1122(1996)* A novel mutation (L174R) in the Ca2+-sensing receptor gene associated with familial hypocalciuric hypercalcemia. Ward B.K., Stuckey B.G.A., Gutteridge D.H., Laing N.G., Pullan P.T., Ratajczak T. *3.3.CO₂-G>Hum. Mutat. 10:233-235(1997)* Sporadic hypoparathyroidism caused by de Novo gain-of-function mutations of the Ca(2+) -sensing receptor. De Luca F., Ray K., Mancilla E.E., Fan G.-F., Winer K.K., Gore P., Spiegel A.M., Baron J.J. *Clin. Endocrinol. Metab. 82:2710-2715(1997)* Two novel missense mutations in calcium-sensing receptor gene associated with neonatal severe hyperparathyroidism. Kobayashi M., Tanaka H., Tsuzuki K., Tsuyuki M., Igaki H., Ichinose Y., Aya K., Nishioka N., Seino Y. *J. Clin. Endocrinol. Metab. 82:2716-2719(1997)* Familial hypoparathyroidism identification of a novel gain of function mutation in transmembrane domain 5 of the calcium-sensing receptor. Watanabe T., Bai M., Lane C.R., Matsumoto S., Minamitani K., Minagawa M., Niimi H., Brown E.M., Yasuda T. *J. Clin. Endocrinol. Metab. 83:2497-2502(1998)* An adult patient with severe hypercalcaemia and hypocalciuria due to a novel homozygous inactivating mutation of calcium-sensing receptor. Chikatsu N., Fukumoto S., Suzawa M., Tanaka Y., Takeuchi Y., Takeda S., Tamura Y., Matsumoto T., Fujita T. *Clin. Endocrinol. (Oxf.) 50:537-543(1999)* A novel activating mutation in calcium-sensing receptor gene associated with a family of autosomal dominant hypocalcemia. Okazaki R., Chikatsu N., Nakatsu M., Takeuchi Y., Ajima M., Miki J., Fujita T., Arai M., Totsuka Y., Tanaka K., Fukumoto S. *J. Clin. Endocrinol. Metab. 84:363-366(1999)* Autosomal dominant hypoparathyroidism associated with short stature and premature osteoarthritis. Stock J.L., Brown R.S., Baron J., Coderre J.A., Mancilla E., De Luca F., Ray K., Mericq M.V. *J. Clin. Endocrinol. Metab. 84:3036-3040(1999)* A986S polymorphism of the calcium-sensing receptor and circulating calcium concentrations. Cole D.E.C., Peltekova V.D., Rubin L.A., Hawker G.A., Vieth R., Liew C.C., Hwang D.M., Evrovski J., Hendy G.N. *Lancet 353:112-115(1999)* Familial hypercalcemia and hypercalciuria caused by a novel mutation in the cytoplasmic tail of the calcium receptor. Carling T., Szabo E., Bai M., Ridefelt P., Westin G., Gustavsson P., Trivedi S., Hellman P., Brown E.M., Dahl N., Rastad J.J. *Clin. Endocrinol. Metab. 85:2042-2047(2000)* A novel mutation in Ca2+-sensing receptor gene in familial hypocalciuric hypercalcemia. Nakayama T., Minato M., Nakagawa M., Soma M., Tobe H., Aoi N., Kosuge K., Sato M., Ozawa Y., Kanmatsuse K., Kokubun S. *Endocrine 15:277-282(2001)* Association between total serum calcium and the A986S polymorphism of the calcium-sensing receptor gene. Cole D.E.C., Vieth R., Trang H.M., Wong B.Y.-L., Hendy G.N., Rubin L.A. *Mol. Genet. Metab. 72:168-174(2001)* A family of autosomal dominant hypocalcemia with a positive correlation between serum calcium and magnesium identification of a novel gain of function mutation (Ser(820) Phe) in the calcium-sensing receptor. Nagase T., Murakami T., Tsukada T., Kitamura R., Chikatsu N., Takeo H., Takata N., Yasuda H., Fukumoto S., Tanaka Y., Nagata N., Yamaguchi K., Akatsu T., Yamamoto M. *J. Clin. Endocrinol. Metab. 87:2681-2687(2002)* Hydrochlorothiazide effectively reduces urinary calcium excretion in two Japanese patients with gain-of-function mutations of the calcium-sensing receptor gene. Sato K., Hasegawa Y., Nakae J., Nanao K., Takahashi I., Tajima T., Shinohara N., Fujieda K. *J. Clin. Endocrinol. Metab. 87:3068-3073(2002)* Association between activating mutations of calcium-sensing receptor and Bartter's syndrome. Watanabe S., Fukumoto S., Chang H., Takeuchi Y., Hasegawa Y., Okazaki R., Chikatsu N., Fujita T. *Lancet 360:692-694(2002)* Autosomal dominant hypocalcemia a novel activating mutation (E604K) in the cysteine-rich domain of the calcium-sensing receptor. Tan Y.M., Cardinal J., Franks A.H., Mun H.-C., Lewis N., Harris L.B., Prins J.B., Conigrave A.D. *J. Clin. Endocrinol. Metab. 88:605-610(2003)* Recurrent familial hypocalcemia due to germline mosaicism for an activating mutation of the calcium-sensing receptor gene. Hendy G.N., Minutti C., Canaff L., Pidashveva S., Yang B., Nouhi Z., Zimmerman D., Wei C., Cole D.E.C. *J. Clin. Endocrinol. Metab.*

NCBI AND UNIPROT INFORMATION

NCBI GI #	37577159
NCBI GeneID	846
NCBI Accession #	NP_000379.2
NCBI GenBank Nucleotide #	NM_000388.3
UniProt Accession #	P41180; Q13912; Q16108; Q16109; Q16110; Q16379; Q2M1T0; Q4PJ19
Molecular Weight	68.6 kDa
NCBI Official Full Name	extracellular calcium-sensing receptor isoform 2
NCBI Official Synonym Full Names	calcium sensing receptor
NCBI Official Symbol	CASR
NCBI Official Synonym Symbols	CAR; FHH; FIH; HHC; EIG8; HHC1; NSHPT; PCAR1; GPRC2A; HYPOC1
NCBI Protein Information	extracellular calcium-sensing receptor
UniProt Protein Name	Extracellular calcium-sensing receptor
UniProt Gene Name	CASR
UniProt Synonym Gene Names	GPRC2A; PCAR1; CaSR; PCaR1
UniProt Entry Name	CASR_HUMAN

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