

# Tumor necrosis factor receptor superfamily member 6

Organism: Homo sapiens (Human) | Gene names: FAS, APT1, FAS1, TNFRSF6



**Entry:** P25445

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**Mass:** 37.732 Da

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**Transmembrane:** 1

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**Subcellular location:** [Isoform 1]: Cell membrane

{ECO:0000269|PubMed:1713127,

ECO:0000269|PubMed:25301068}, Single-pass type I

membrane protein {ECO:0000305}. Membrane raft

{ECO:0000269|PubMed:25301068}., [Isoform 2]:

Secreted., [Isoform 3]: Secreted., [Isoform 4]: Secreted.,

[Isoform 5]: Secreted., [Isoform 6]: Secreted.

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**Cofactor:** -

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**Extinction coefficient:** 0.735

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**Isoelectric Point:** 8.29

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**PubMed ID:** 1713127, 1375228, 7575433, 7533181,  
8598453, 8648105, 17336828, 14702039, 15164054,  
15489334, 7538908, 10542291, 10535980, 14759258,  
15465831, 18846110, 18691976, 18669648,  
19159218, 21109225, 20068231, 21269460,  
22171320, 23955153, 24275569, 25301068,  
30979585, 8967952, 19118384, 24914971, 7540117,  
8929361, 9028321, 9028957, 9322534, 9787134,  
9821419, 10090885, 10515860, 10340403, 9927496,  
10620127, 11418480, 20935634

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**Family:** -

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**Function:**

Receptor for TNFSF6/FASLG. The adapter molecule FADD recruits caspase-8 to the activated receptor. The resulting death-inducing signaling complex (DISC) performs caspase-8 proteolytic activation which initiates the subsequent cascade of caspases (aspartate-specific cysteine proteases) mediating apoptosis. FAS-mediated apoptosis may have a role in the induction of peripheral tolerance, in the antigen-stimulated suicide of mature T-cells, or both. The secreted isoforms 2 to 6 block apoptosis (in vitro). {ECO:0000269|PubMed:19118384, ECO:0000269|PubMed:7533181}.

**Data from experiment(s): Hek293 membrane pellets**

|                |  |                   |  |
|----------------|--|-------------------|--|
| DIBMA 10       |  0.188704   | DIBMA 12          |  NaN        |
| DIBMA Glycerol |  NaN        | DIBMA Glucosamine |  NaN        |
| Amphipol 17    |  0.853371   | Amphipol 18       |  0.962741   |
| AASTY 6-45     |  NaN        | AASTY 11-45       |  0.0881281  |
| AASTY 6-50     |  0.478154   | AASTY 11-50       |  NaN        |
| AASTY 6- 55    |  0.286885   | AASTY 11- 55      |  0.0799744  |
| SMALP 502-E    |  0.319469   | SMALP 140-I       |  0.392393   |
| SMALP 300      |  0.467791   | SMALP 200         |  0.767631   |
| SMALP 140      |  NaN       | DDM               |  0.336623  |
| DM             |  0.830489 | LMNG              |  0.770784 |
| Fos-12         |  0.445264 | Digitonin-A       |  0.386274 |
| RIPA           |  0.575492 |                   |  |

**Data from experiment(s): Hek293 membrane pellets 1 %**

|                |   |                   |   |
|----------------|---|-------------------|---|
| DIBMA 10       |  NaN         | DIBMA 12          |  NaN         |
| DIBMA Glycerol |  0.696359873 | DIBMA Glucosamine |  No data     |
| Amphipol 17    |  0.862558067 | Amphipol 18       |  0.811264753 |
| AASTY 6-45     |  No data     | AASTY 11-45       |  0.601687312 |
| AASTY 6-50     |  0.841077268 | AASTY 11-50       |  No data     |
| AASTY 6- 55    |  0.441849649 | AASTY 11- 55      |  No data     |
| SMALP 502-E    |  0.509622216 | SMALP 140-I       |  No data     |
| SMALP 300      |  0.5578686   | SMALP 200         |  NaN         |
| SMALP 140      |  No data     | DDM               |  1           |
| DM             |  No data     | LMNG              |  0.968748152 |
| Fos-12         |  No data     | Digitonin-A       |  0.504631579 |
| RIPA           |  No data     |                   |   |

**Involvement in disease:**

Autoimmune lymphoproliferative syndrome 1A (ALPS1A) [MIM:601859]: A disorder of apoptosis that manifests in early childhood and results in the accumulation of autoreactive lymphocytes. It is characterized by non-malignant lymphadenopathy with hepatosplenomegaly, and autoimmune hemolytic anemia, thrombocytopenia and neutropenia. {ECO:0000269|PubMed:10090885, ECO:0000269|PubMed:10340403, ECO:0000269|PubMed:10515860, ECO:0000269|PubMed:11418480, ECO:0000269|PubMed:17336828, ECO:0000269|PubMed:20935634, ECO:0000269|PubMed:7540117, ECO:0000269|PubMed:8929361, ECO:0000269|PubMed:9028321, ECO:0000269|PubMed:9028957, ECO:0000269|PubMed:9322534, ECO:0000269|PubMed:9821419, ECO:0000269|PubMed:9927496}. Note=The disease is caused by variants affecting the gene represented in this entry.

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**Binding site:**

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**Tissue specificity:**

Isoform 1 and isoform 6 are expressed at equal levels in resting peripheral blood mononuclear cells. After activation there is an increase in isoform 1 and decrease in the levels of isoform 6. {ECO:0000269|PubMed:7575433}.

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**3D (X-ray crystallography):**

Model (1); X-ray crystallography (4); NMR spectroscopy (2)

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**Pharmaceutical use:**

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**AS sequence:**

MLGIWTLPLVLTSVARLSSKSVNAQVTDINSGLELRKTVTTVETQNLEGLHHDGQFCHKPCPPGERKARDCTVNGDEPDCVP  
CQEGKEYTDKAHFSSKRRRCRLCDEGHGLEVEINCTRTQNTKCRCKPNFFCNSTVCEHCDPCTKCEHGIIECTLSNTKCKEEGS  
RSNLGWLCLLLLPIPLIVWVKRKEVQKTCRKHRRKENQGSHEPTLNPETVAINLSDVDLSKYITTIAGVMTLSQVKG FVRKNGVN  
EAKIDEIKNDNVQDTAEQKVQLLRNWHQLHGKKEAYDTLIKDLKKANLCTLAEKIQTIILKDITSDSENSNFRNEIQSLV

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**Creditnotes:**

The protein visualizations are generated with the help of Protter:

Omasits, U., Ahrens, C.H., MÃ¼ller, S., Wollscheid, B. "Protter: interactive protein feature visualization and integration with experimental proteomic data". *Bioinformatics*. 2014 Mar 15; **30**(6):884-6. doi: 10.1093/bioinformatics/btt607.

IP and extinction coefficients are gathered from Protparam by ExPASy:

Gasteiger, E., Hoogland, C., Gattiker, A., Duvaud, S., Wilkins, M.R., Appel, R.D., Bairoch, A. "Protein Identification and Analysis Tools on the ExPASy Server". (In) *John M. Walker (ed): The Proteomics Protocols Handbook*, Humana Press (2005). pp. 571-607

The basic knowledge is found on UniProt:

The UniProt Consortium. "UniProt: the universal protein knowledgebase in 2021". *Nucleic Acids Res.* **49**:D1 (2021)

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