# Basis Bern (EFT WET-4)

## Sectors

The effective Lagrangian is defined as

$$\mathcal{L}_{\text{eff}} = -\mathcal{H}_{\text{eff}} = \sum_{O_i = O_i^{\dagger}} C_i O_i + \sum_{O_i \neq O_i^{\dagger}} \left( C_i O_i + C_i^* O_i^{\dagger} \right).$$

#### udenu

WC name	Operator	Type
1udee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{e}\gamma_\mu\nu_e)$	C
5udee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{e}\nu_e)$	$\mathbf{C}$
1pudee	$\frac{4 \overleftarrow{G}_F}{\sqrt{2}} (\bar{u} P_L \gamma^\mu d) (\bar{e} \gamma_\mu \nu_e)$	$\mathbf{C}$
5pudee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{e}\nu_e)$	$\mathbf{C}$
7pudee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_e)$	$\mathbf{C}$
1udemu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{e}\gamma_\mu \nu_\mu)$	$\mathbf{C}$
5udemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{e}\nu_\mu)$	$\mathbf{C}$
1pudemu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{e}\gamma_\mu u_\mu)$	$^{\mathrm{C}}$
5pudemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{e}\nu_\mu)$	$^{\mathrm{C}}$
7pudemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_{\mu})$	$^{\mathrm{C}}$
1udetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{e}\gamma_\mu \nu_ au)$	$^{\mathrm{C}}$
5udetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{e}\nu_{\tau})$	$^{\mathrm{C}}$
1pudetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{e}\gamma_\mu\nu_ au)$	$^{\mathrm{C}}$
5pudetau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{e}\nu_{\tau})$	$^{\mathrm{C}}$
7pudetau	$\frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{u} P_L \sigma^{\mu\nu} d) (\bar{e} \sigma_{\mu\nu} \nu_\tau)$	$^{\mathrm{C}}$

#### udmunu

WC name	Operator	Type
1udmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_e)$	C
5udmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{\mu}\nu_e)$	$\mathbf{C}$
1pudmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_e)$	$\mathbf{C}$
5pudmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{\mu}\nu_e)$	$\mathbf{C}$
7pudmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_e)$	$\mathbf{C}$
1udmumu	$\frac{\frac{4G_F}{\sqrt{2}}}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\mu)$ $\frac{4G_F}{\sqrt{2}}(\bar{u}P_R d)(\bar{\mu}\nu_\mu)$	$\mathbf{C}$
5udmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{\mu}\nu_{\mu})$	$\mathbf{C}$
1pudmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\mu)$	$\mathbf{C}$
5pudmumu	$\frac{4\widetilde{G}_F^2}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\mu)$ $\frac{4G_F}{\sqrt{2}}(\bar{u}P_L d)(\bar{\mu}\nu_\mu)$	С

WC name	Operator	Type
7pudmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})$	C
1udmutau	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})}{\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}d)(\bar{\mu}\gamma_{\mu}\nu_{\tau})}$	$^{\mathrm{C}}$
5udmutau	$\frac{\frac{4G_F}{\sqrt{2}}}{(\bar{u}P_Rd)(\bar{\mu}\nu_\tau)}$ $\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\tau)$	$^{\mathrm{C}}$
1pudmutau	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\tau)$	$^{\mathrm{C}}$
5pudmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{\mu}\nu_{\tau})$	$^{\mathrm{C}}$
7pudmutau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L d)(\bar{\mu}\nu_{\tau})$ $\frac{4G_F}{\sqrt{2}}(\bar{u}P_L \sigma^{\mu\nu} d)(\bar{\mu}\sigma_{\mu\nu}\nu_{\tau})$	С

## udtaunu

WC name	Operator	Type
1udtaue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_e)$	C
5udtaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{\tau}\nu_e)$	$\mathbf{C}$
1pudtaue	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_e)$	$\mathbf{C}$
5pudtaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{\tau}\nu_e)$	$\mathbf{C}$
7pudtaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\tau}\sigma_{\mu\nu}\nu_e)$	$\mathbf{C}$
1udtaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_\mu)$	$^{\mathrm{C}}$
5udtaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{\tau}\nu_\mu)$	$^{\mathrm{C}}$
1pudtaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_\mu)$	$\mathbf{C}$
5pudtaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{\tau} u_\mu)$	$\mathbf{C}$
7pudtaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\tau}\sigma_{\mu\nu}\nu_\mu)$	$^{\mathrm{C}}$
1udtautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_ au)$	$\mathbf{C}$
5udtautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Rd)(\bar{\tau}\nu_{ au})$	$\mathbf{C}$
1pudtautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_ au)$	$\mathbf{C}$
5pudtautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ld)(\bar{ au} u_ au)$	$\mathbf{C}$
7pudtautau	$\frac{4\tilde{\zeta}_F^2}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}d)(\bar{\tau}\sigma_{\mu\nu}\nu_{\tau})$	C

## cdenu

WC name	Operator	Type
1cdee	$\begin{split} &\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{e}\gamma_\mu\nu_e)\\ &\frac{4G_F}{\sqrt{2}}(\bar{c}P_R d)(\bar{e}\nu_e)\\ &\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{e}\gamma_\mu\nu_e)\\ &\frac{4G_F}{\sqrt{2}}(\bar{c}P_L d)(\bar{e}\nu_e) \end{split}$	С
5cdee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Rd)(\bar{e}\nu_e)$	$\mathbf{C}$
1pcdee	$\frac{4\breve{G_F}}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{e}\gamma_\mu\nu_e)$	$\mathbf{C}$
5pcdee	$\frac{4\breve{G_F}}{\sqrt{2}}(\bar{c}P_Ld)(\bar{e}\nu_e)$	$\mathbf{C}$
7pcdee	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_e)$	С
1cdemu	$rac{4G_F^2}{\sqrt{2}}(ar{c}P_R\gamma^\mu d)(ar{e}\gamma_\mu u_\mu)$	$\mathbf{C}$
5cdemu	$rac{4ar{G_F}}{\sqrt{2}}(ar{c}P_Rd)(ar{e} u_\mu)$	C

WC name	Operator	Type
1pcdemu	$\begin{array}{l} \frac{4G_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{e}\gamma_\mu\nu_\mu) \\ \frac{4G_F}{\sqrt{2}}(\bar{c}P_L d)(\bar{e}\nu_\mu) \\ \frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu} d)(\bar{e}\sigma_{\mu\nu}\nu_\mu) \\ \frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{e}\gamma_\mu\nu_\tau) \end{array}$	С
5pcdemu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Ld)(\bar{e}\nu_\mu)$	$\mathbf{C}$
7pcdemu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_{\mu})$	$\mathbf{C}$
1cdetau	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{e}\gamma_\mu\nu_ au)$	$\mathbf{C}$
5cdetau	$\frac{4\overset{\circ}{G_F}}{\sqrt{2}}(\bar{c}P_Rd)(\bar{e}\nu_{\tau})$	$\mathbf{C}$
1pcdetau	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{e}\gamma_\mu \nu_ au)$	$\mathbf{C}$
5pcdetau	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Ld)(\bar{e}\nu_{\tau})$	$\mathbf{C}$
7pcdetau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{e}\sigma_{\mu\nu}\nu_{\tau})$	$^{\mathrm{C}}$

## cdmunu

WC name	Operator	Type
1cdmue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_e)$	C
5cdmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Rd)(\bar{\mu}\nu_e)$	$\mathbf{C}$
1pcdmue	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_e)$	$\mathbf{C}$
5pcdmue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Ld)(\bar{\mu}\nu_e)$	$\mathbf{C}$
7pcdmue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_e)$	$\mathbf{C}$
1cdmumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\mu)$	$\mathbf{C}$
5cdmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Rd)(\bar{\mu}\nu_{\mu})$	$\mathbf{C}$
1pcdmumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu\nu_\mu)$	$\mathbf{C}$
5pcdmumu	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{c}P_Ld)(\bar{\mu} u_{\mu})$	$\mathbf{C}$
7pcdmumu	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})$	$\mathbf{C}$
1cdmutau	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{\mu}\gamma_\mu  u_ au)$	$\mathbf{C}$
5cdmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Rd)(\bar{\mu}\nu_{\tau})$	$\mathbf{C}$
1pcdmutau	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{\mu}\gamma_\mu  u_ au)$	$\mathbf{C}$
5pcdmutau	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{c}P_Ld)(\bar{\mu} u_{ au})$	$\mathbf{C}$
7pcdmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{\mu}\sigma_{\mu\nu}\nu_{ au})$	$^{\mathrm{C}}$

## ${\tt cdtaunu}$

WC name	Operator	Type
1cdtaue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_e)$	C
5cdtaue	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_e)}{\frac{4G_F}{\sqrt{2}}(\bar{c}P_R d)(\bar{\tau}\nu_e)}$	$\mathbf{C}$
1pcdtaue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_e)$	$\mathbf{C}$
5pcdtaue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Ld)(\bar{\tau}\nu_e)$	$\mathbf{C}$
7pcdtaue	$\frac{4\tilde{G}_F^r}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{\tau}\sigma_{\mu\nu}\nu_e)$	$\mathbf{C}$

WC name	Operator	Type
1cdtaumu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_\mu)$	C
5cdtaumu	$rac{4 ar{G}_F}{\sqrt{2}} (ar{c} P_R d) (ar{ au}  u_\mu)$	$\mathbf{C}$
1pcdtaumu	$rac{4 \widetilde{G}_F^c}{\sqrt{2}} (ar{c} P_L \gamma^\mu d) (ar{ au} \gamma_\mu  u_\mu)$	$\mathbf{C}$
5pcdtaumu	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{c}P_Ld)(\bar{\tau}\nu_\mu)$	$\mathbf{C}$
7pcdtaumu	$rac{4G_F^2}{\sqrt{2}}(ar{c}P_L\sigma^{\mu u}d)(ar{ au}\sigma_{\mu u} u_\mu)$	$\mathbf{C}$
1cdtautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu d)(\bar{\tau}\gamma_\mu\nu_ au)$	$\mathbf{C}$
5cdtautau	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_Rd)(\bar{ au} u_ au)$	$\mathbf{C}$
1pcdtautau	$rac{4 ar{G}_F}{\sqrt{2}} (ar{c} P_L \gamma^\mu d) (ar{ au} \gamma_\mu  u_ au)$	$\mathbf{C}$
5pcdtautau	$rac{4\widetilde{G}_F}{\sqrt{2}}(ar{c}P_Ld)(ar{ au} u_ au)$	$\mathbf{C}$
7pcdtautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}d)(\bar{\tau}\sigma_{\mu\nu}\nu_\tau)$	$^{\mathrm{C}}$

## sdsd

WC name	Operator	Type
1dsds	$\frac{4G_F}{\sqrt{2}}(\bar{d}\gamma_\mu P_L s)(\bar{d}\gamma^\mu P_L s)$	C
5dsds	$rac{4reve{G}_{F}}{\sqrt{2}}(ar{d}_{lpha}P_{L}s_{eta})(ar{d}_{eta}P_{R}s_{lpha})$	$\mathbf{C}$
2dsds	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{d}P_Ls)$	$\mathbf{C}$
1pdsds	$\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(\bar{d}\gamma_{\mu}P_Rs)(\bar{d}\gamma^{\mu}P_Rs)$	$\mathbf{C}$
3dsds	$\frac{4\tilde{G}_{F}}{\tilde{G}_{C}}(\bar{d}_{C}P_{L}s_{B})(\bar{d}_{B}P_{L}s_{C})$	$\mathbf{C}$
2pdsds	$\frac{\sqrt{2}}{\sqrt{2}}(ar{d}P_Rs)(ar{d}P_Rs)$	$\mathbf{C}$
4dsds	$\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(\bar{d}P_Ls)(\bar{d}P_Rs)$	$\mathbf{C}$
3pdsds	$rac{4ar{G_F}}{\sqrt{2}}(ar{d}_lpha P_R s_eta)(ar{d}_eta P_R s_lpha)$	C

## usenu

WC name	Operator	Type
1usee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu s)(\bar{e}\gamma_\mu\nu_e)$	$\overline{\mathbf{C}}$
5usee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{e}\nu_e)$	$\mathbf{C}$
1pusee	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_e)$	$\mathbf{C}$
5pusee	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{e}\nu_e)$	$\mathbf{C}$
7pusee	$\frac{4 \overleftarrow{Q_F}}{\sqrt{2}} (\bar{u} P_L \sigma^{\mu \nu} s) (\bar{e} \sigma_{\mu \nu} \nu_e)$	$\mathbf{C}$
1usemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\mu})$	$\mathbf{C}$
5usemu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{e}\nu_\mu)$	$\mathbf{C}$
1pusemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu s)(\bar{e}\gamma_\mu \nu_\mu)$	$\mathbf{C}$
5pusemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{e}\nu_\mu)$	$\mathbf{C}$
7pusemu	$\frac{4\tilde{Y}_{F}^{\sigma}}{\sqrt{2}}(\bar{u}P_{L}\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_{\mu})$	C

WC name	Operator	Type
1usetau	$\begin{array}{l} \frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu s)(\bar{e}\gamma_\mu\nu_\tau) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_R s)(\bar{e}\nu_\tau) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu s)(\bar{e}\gamma_\mu\nu_\tau) \\ \frac{4G_F}{\sqrt{2}}(\bar{u}P_L s)(\bar{e}\nu_\tau) \end{array}$	C
5usetau	$\frac{4 \overleftarrow{Q_F}}{\sqrt{2}} (\bar{u} P_R s) (\bar{e} \nu_{\tau})$	$\mathbf{C}$
1pusetau	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{u} P_L \gamma^\mu s) (\bar{e} \gamma_\mu \nu_ au)$	$\mathbf{C}$
5pusetau	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (\bar{u} P_L s) (\bar{e} \nu_{ au})$	С
7pusetau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_\tau)$	C

#### usmunu

WC name	Operator	Type
1usmue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_e)$	$\overline{\mathbf{C}}$
5usmue	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\mu}\nu_e)$	$^{\mathrm{C}}$
1pusmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_e)$	$\mathbf{C}$
5pusmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\mu}\nu_e)$	$\mathbf{C}$
7pusmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_e)$	$\mathbf{C}$
1usmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_{\mu})$	$\mathbf{C}$
5usmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\mu}\nu_{\mu})$	$\mathbf{C}$
1pusmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu s)(\bar{\mu}\gamma_\mu\nu_\mu)$	$\mathbf{C}$
5pusmumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\mu}\nu_{\mu})$	$\mathbf{C}$
7pusmumu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})$	$\mathbf{C}$
1usmutau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}P_R\gamma^\mu s)(\bar{\mu}\gamma_\mu\nu_ au)$	$\mathbf{C}$
5usmutau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\mu}\nu_{\tau})$	$\mathbf{C}$
1pusmutau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu s)(\bar{\mu}\gamma_\mu\nu_ au)$	$\mathbf{C}$
5pusmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\mu} u_{ au})$	$\mathbf{C}$
7pusmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_\tau)$	С

#### ${\tt ustaunu}$

WC name	Operator	Type
1ustaue	$\frac{\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{R}\gamma^{\mu}s)(\bar{\tau}\gamma_{\mu}\nu_{e})}{\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{R}s)(\bar{\tau}\nu_{e})}$ $\frac{\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}\gamma^{\mu}s)(\bar{\tau}\gamma_{\mu}\nu_{e})}{\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}s)(\bar{\tau}\nu_{e})}$ $\frac{\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_{e})}{\frac{4G_{F}}{\sqrt{2}}(\bar{u}P_{L}\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_{e})}$	С
5ustaue	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\tau}\nu_e)$	$\mathbf{C}$
1pustaue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\gamma^{\mu}s)(\bar{\tau}\gamma_{\mu}\nu_e)$	$\mathbf{C}$
5pustaue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\tau}\nu_e)$	$\mathbf{C}$
7pustaue	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_e)$	$\mathbf{C}$
1ustaumu	$\frac{4\check{G_F}}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{\tau}\gamma_{\mu}\nu_{\mu})$	$\mathbf{C}$
5ustaumu	$\frac{4\check{G_F}}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\tau}\nu_\mu)$	$\mathbf{C}$
1pustaumu	$rac{4\check{G}_F}{\sqrt{2}}(ar{u}P_L\gamma^\mu s)(ar{ au}\gamma_\mu u_\mu)$	$\mathbf{C}$

WC name	Operator	Type
5pustaumu	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\tau}\nu_{\mu})}{\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_{\mu})}$ $\frac{\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{\tau}\gamma_{\mu}\nu_{\tau})}{\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\tau}\nu_{\tau})}$	С
7pustaumu	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_{\mu})$	$^{\mathrm{C}}$
1ustautau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_R\gamma^{\mu}s)(\bar{\tau}\gamma_{\mu}\nu_{\tau})$	$^{\mathrm{C}}$
5ustautau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Rs)(\bar{\tau}\nu_{\tau})$	$^{\mathrm{C}}$
1pustautau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{u}P_L\gamma^\mu s)(\bar{\tau}\gamma_\mu  u_ au)$	$^{\mathrm{C}}$
5pustautau	$\frac{4G_F}{\sqrt{2}}(\bar{u}P_Ls)(\bar{\tau}\nu_{\tau})$	$^{\mathrm{C}}$
7pustautau	$rac{4\widetilde{G}_F^2}{\sqrt{2}}(ar{u}P_L\sigma^{\mu u}s)(ar{ au}\sigma_{\mu u} u_ au)$	$\mathbf{C}$

## csenu

WC name	Operator	Type
1csee	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_e)$	
5csee	$\frac{4\overleftarrow{G}_F}{\sqrt{2}}(\bar{c}P_Rs)(\bar{e}\nu_e)$	$^{\mathrm{C}}$
1pcsee	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_e)$	$\mathbf{C}$
5pcsee	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Ls)(\bar{e}\nu_e)$	$\mathbf{C}$
7pcsee	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_e)$	$^{\mathrm{C}}$
1csemu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\mu})$	$^{\mathrm{C}}$
5csemu	$\frac{4G_F^2}{\sqrt{2}}(\bar{c}P_Rs)(\bar{e}\nu_\mu)$	$^{\mathrm{C}}$
1pcsemu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\mu})$	$\mathbf{C}$
5pcsemu	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{c}P_L s)(\bar{e}\nu_\mu)$	$\mathbf{C}$
7pcsemu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_{\mu})$	$\mathbf{C}$
1csetau	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^{\mu}s)(\bar{e}\gamma_{\mu}\nu_{\tau})$	$\mathbf{C}$
5csetau	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Rs)(\bar{e}\nu_{\tau})$	$\mathbf{C}$
1pcsetau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu s)(\bar{e}\gamma_\mu \nu_ au)$	$^{\mathrm{C}}$
5pcsetau	$\frac{4\overleftarrow{G}_F}{\sqrt{2}}(\bar{c}P_Ls)(\bar{e}\nu_{\tau})$	$^{\mathrm{C}}$
7pcsetau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\nu_\tau)$	$^{\mathrm{C}}$

#### csmunu

WC name	Operator	Type
1csmue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_e)$	C
5csmue	$\frac{4\overleftarrow{G}_F}{\sqrt{2}}(\bar{c}P_Rs)(\bar{\mu}\nu_e)$	$^{\mathrm{C}}$
1pcsmue	$rac{4G_F}{\sqrt{2}}(ar{c}P_R\gamma^\mu s)(ar{\mu}\gamma_\mu u_e) \ rac{4G_F}{\sqrt{2}}(ar{c}P_R s)(ar{\mu} u_e) \ rac{4G_F}{\sqrt{2}}(ar{c}P_L\gamma^\mu s)(ar{\mu}\gamma_\mu u_e)$	$^{\mathrm{C}}$
5pcsmue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L s)(\bar{\mu}\nu_e)$	$^{\mathrm{C}}$
7pcsmue	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_e)$	$^{\mathrm{C}}$
1csmumu	$\frac{4\tilde{G}_F^F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_e)$ $\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_{\mu})$	$^{\mathrm{C}}$

WC name	Operator	Type
5csmumu	$ \frac{\frac{4G_F}{\sqrt{2}}(\bar{c}P_R s)(\bar{\mu}\nu_{\mu})}{\frac{4G_F}{\sqrt{2}}(\bar{c}P_L \gamma^{\mu} s)(\bar{\mu}\gamma_{\mu}\nu_{\mu})} \\ \frac{\frac{4G_F}{\sqrt{2}}(\bar{c}P_L s)(\bar{\mu}\nu_{\mu})}{\frac{4G_F}{\sqrt{2}}(\bar{c}P_L \sigma^{\mu\nu} s)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})} $	C
1pcsmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_{\mu})$	$\mathbf{C}$
5pcsmumu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Ls)(\bar{\mu}\nu_{\mu})$	$\mathbf{C}$
7pcsmumu	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_{\mu})$	$\mathbf{C}$
1csmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_R\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu}\nu_{\tau})$	$\mathbf{C}$
5csmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Rs)(\bar{\mu} u_{ au})$	$\mathbf{C}$
1pcsmutau	$\frac{4\ddot{G_F}}{\sqrt{c}}(\bar{c}P_L\gamma^{\mu}s)(\bar{\mu}\gamma_{\mu} u_{ au})$	$\mathbf{C}$
5pcsmutau	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_Ls)(\bar{\mu}\nu_\tau)$	$\mathbf{C}$
7pcsmutau	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\nu_\tau)$	C

#### cstaunu

WC name	Operator	Type
1cstaue	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_R\gamma^{\mu}s)(\bar{\tau}\gamma_{\mu}\nu_e)$	C
5cstaue	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_Rs)(\bar{\tau}\nu_e)$	$^{\mathrm{C}}$
1pcstaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu s)(\bar{\tau}\gamma_\mu \nu_e)$	$^{\mathrm{C}}$
5pcstaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Ls)(\bar{\tau}\nu_e)$	$^{\mathrm{C}}$
7pcstaue	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_e)$	$^{\mathrm{C}}$
1cstaumu	$\frac{4\tilde{G}_F^F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu s)(\bar{ au}\gamma_\mu u_\mu)$	$^{\mathrm{C}}$
5cstaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Rs)(\bar{ au} u_\mu)$	$^{\mathrm{C}}$
1pcstaumu	$rac{4\widetilde{G}_F^c}{\sqrt{2}}(ar{c}P_L\gamma^\mu s)(ar{ au}\gamma_\mu u_\mu)$	$^{\mathrm{C}}$
5pcstaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Ls)(\bar{ au} u_\mu)$	$^{\mathrm{C}}$
7pcstaumu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_{\mu})$	$^{\mathrm{C}}$
1cstautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_R\gamma^\mu s)(\bar{\tau}\gamma_\mu  u_ au)$	$^{\mathrm{C}}$
5cstautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Rs)(\bar{\tau}\nu_{\tau})$	$^{\mathrm{C}}$
1pcstautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\gamma^\mu s)(\bar{\tau}\gamma_\mu  u_ au)$	$^{\mathrm{C}}$
5pcstautau	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{c}P_Ls)(\bar{ au} u_ au)$	$^{\mathrm{C}}$
7pcstautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\nu_\tau)$	$^{\mathrm{C}}$

## sdcu

WC name	Operator	Type
1dsuc	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{u}\gamma^\mu c)$	$^{\mathrm{C}}$
2dsuc	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{u}\gamma^\mu c)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu T^A s)(\bar{u}\gamma^\mu T^A c)}$	$\mathbf{C}$
3dsuc	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu\nu\rho}c)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}T^As)(\bar{u}\gamma^{\mu\nu\rho}T^Ac)}$	$\mathbf{C}$
4dsuc	$\frac{4\overline{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}T^As)(\bar{u}\gamma^{\mu\nu\rho}T^Ac)$	$\mathbf{C}$

WC name	Operator	Type
5dsuc	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{u}c)$	C
6dsuc	$\frac{4\overset{Q^2}{G_F}}{\sqrt{2}}(\bar{d}P_RT^As)(\bar{u}T^Ac)$	$\mathbf{C}$
7dsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}c)$	$\mathbf{C}$
8dsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}T^As)(\bar{u}\sigma_{\mu\nu}T^Ac)$	$^{\mathrm{C}}$
9dsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{u}\gamma^{\mu\nu\rho\sigma}c)$	$^{\mathrm{C}}$
10dsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}T^As)(\bar{u}\gamma^{\mu\nu\rho\sigma}T^Ac)$	$^{\mathrm{C}}$
1pdsuc	$\frac{4\overset{Q^2_F}{\sqrt{2}}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{u}\gamma^\mu c)$	$^{\mathrm{C}}$
2pdsuc	$\frac{4\overset{Q^2}{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu T^As)(\bar{u}\gamma^\mu T^Ac)$	$^{\mathrm{C}}$
3pdsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu\nu\rho}c)$	$^{\mathrm{C}}$
4pdsuc	$\frac{4\tilde{Q}_F^2}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}T^As)(\bar{u}\gamma^{\mu\nu\rho}T^Ac)$	$^{\mathrm{C}}$
5pdsuc	$\frac{4\ddot{Q}_F^2}{\sqrt{2}}(\bar{d}P_L s)(\bar{u}c)$	$^{\mathrm{C}}$
6pdsuc	$\frac{4\overset{A}{G_F}}{\sqrt{2}}(\bar{d}P_LT^As)(\bar{u}T^Ac)$	$^{\mathrm{C}}$
7pdsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}c)$	$^{\mathrm{C}}$
8pdsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}T^As)(\bar{u}\sigma_{\mu\nu}T^Ac)$	$\mathbf{C}$
9pdsuc	$\frac{4Q_F^2}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{u}\gamma^{\mu\nu\rho\sigma}c)$	$\mathbf{C}$
10pdsuc	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}T^As)(\bar{u}\gamma^{\mu\nu\rho\sigma}T^Ac)$	$\mathbf{C}$

### sduc

WC name	Operator	Type
1dscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{c}\gamma^\mu u)$	C
2dscu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu T^As)(\bar{c}\gamma^\mu T^Au)$	$\mathbf{C}$
3dscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{c}\gamma^{\mu\nu\rho}u)$	$\mathbf{C}$
4dscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}T^As)(\bar{c}\gamma^{\mu\nu\rho}T^Au)$	$\mathbf{C}$
5dscu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{c}u)$	$\mathbf{C}$
6dscu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_RT^As)(\bar{c}T^Au)$	$\mathbf{C}$
7dscu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{c}\sigma_{\mu\nu}u)$	$\mathbf{C}$
8dscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}T^As)(\bar{c}\sigma_{\mu\nu}T^Au)$	$\mathbf{C}$
9dscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{c}\gamma^{\mu\nu\rho\sigma}u)$	$\mathbf{C}$
10dscu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}T^As)(\bar{c}\gamma^{\mu\nu\rho\sigma}T^Au)$	$\mathbf{C}$
1pdscu	$rac{4reve{G_F}}{\sqrt{2}}(ar{d}P_L\gamma_\mu s)(ar{c}\gamma^\mu u)$	$\mathbf{C}$
2pdscu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu T^As)(\bar{c}\gamma^\mu T^Au)$	$\mathbf{C}$
3pdscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{c}\gamma^{\mu\nu\rho}u)$	$\mathbf{C}$
4pdscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}T^As)(\bar{c}\gamma^{\mu\nu\rho}T^Au)$	$\mathbf{C}$
5pdscu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{c}u)$	$^{\mathrm{C}}$
6pdscu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_LT^As)(\bar{c}T^Au)$	$^{\mathrm{C}}$
7pdscu	$\frac{4 \overleftarrow{G}_F}{\sqrt{2}} (ar{d} P_L \sigma^{\mu  u} s) (ar{c} \sigma_{\mu  u} u)$	$\mathbf{C}$

WC name	Operator	Type
8pdscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}T^As)(\bar{c}\sigma_{\mu\nu}T^Au)$	C
9pdscu	$\frac{\frac{4\breve{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{c}\gamma^{\mu\nu\rho\sigma}u)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}T^As)(\bar{c}\gamma^{\mu\nu\rho\sigma}T^Au)}$	$^{\mathrm{C}}$
10pdscu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}T^As)(\bar{c}\gamma^{\mu\nu\rho\sigma}T^Au)$	$^{\mathrm{C}}$

## $\operatorname{sd}$

$\begin{array}{lll} & \frac{4G_F}{\sqrt{2}} \frac{e}{g_s^2} m_s (\bar{d}P_R \sigma_{\mu\nu} s) \\ 8 \mathrm{gds} & \frac{4G_F}{\sqrt{2}} \frac{1}{g_s} m_s (\bar{d}P_R \sigma_{\mu\nu} T) \\ 7 \mathrm{pgammads} & \frac{4G_F}{\sqrt{2}} \frac{e}{g_s} m_s (\bar{d}P_L \sigma_{\mu\nu} s) \\ 8 \mathrm{pgds} & \frac{4G_F}{\sqrt{2}} \frac{1}{g_s} m_s (\bar{d}P_L \sigma_{\mu\nu} T) \\ 1 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_\mu s) (\bar{u}\gamma^\mu u) \\ 2 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_\mu T) (\bar{u}\gamma^\mu u) \\ 3 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_\mu \mu \rho) (\bar{u}\gamma^\mu u) \\ 4 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_\mu \nu \rho) (\bar{u}\gamma^\mu u) \\ 5 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_\mu \nu \rho) (\bar{u}u) \\ 6 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma^\mu s) (\bar{u}u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) (\bar{u}\sigma_\mu u) \\ 7 \mathrm{dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \sigma^{\mu\nu} s) ($	$\begin{array}{cccc} \Gamma^{A}s)G^{\mu\nu}_{A} & & C \\ )F^{\mu\nu} & & C \\ \Gamma^{A}s)G^{\mu\nu}_{A} & & C \\ u) & & C \\ \gamma^{\mu}T^{A}u) & & C \\ (\bar{u}\gamma^{\mu\nu\rho}T^{A}u) & & C \\ & & C \\ \hline & & C \\ \end{array}$
$\begin{array}{lll} \text{8gds} & \frac{4G_F}{\sqrt{2}} \frac{1}{g_s} m_s (\bar{d}P_R \sigma_{\mu\nu} T_s) \\ \text{7pgammads} & \frac{4G_F}{\sqrt{2}} \frac{e}{g_s^2} m_s (\bar{d}P_L \sigma_{\mu\nu} T_s) \\ \text{8pgds} & \frac{4G_F}{\sqrt{2}} \frac{1}{g_s} m_s (\bar{d}P_L \sigma_{\mu\nu} T_s) \\ \text{1dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_{\mu} S) (\bar{u} \gamma^{\mu} u_s) \\ \text{2dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_{\mu\nu} T_s) (\bar{u} \gamma^{\mu} u_s) \\ \text{3dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_{\mu\nu\rho} S) (\bar{u} \gamma^{\mu} u_s) \\ \text{4dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_{\mu\nu\rho} T_s) (\bar{u} \gamma^{\mu} u_s) \\ \text{5dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R \gamma_{\mu\nu\rho} T_s) (\bar{u} u_s) \\ \text{6dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R T_s) (\bar{u} u_s) \\ \text{7dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R T_s) (\bar{u} T_s) \\ \end{array}$	$\begin{array}{cccc} \Gamma^{A}s)G^{\mu\nu}_{A} & & C \\ )F^{\mu\nu} & & C \\ \Gamma^{A}s)G^{\mu\nu}_{A} & & C \\ u) & & C \\ \gamma^{\mu}T^{A}u) & & C \\ (\bar{u}\gamma^{\mu\nu\rho}T^{A}u) & & C \\ & & C \\ \hline & & C \\ \end{array}$
$\begin{array}{lll} {\rm 7pgammads} & \frac{4G_F}{\sqrt{2}} \frac{e}{g_s^2} m_s (\bar{d}P_L\sigma_{\mu\nu}s) \\ {\rm 8pgds} & \frac{4G_F}{\sqrt{2}} \frac{1}{g_s} m_s (\bar{d}P_L\sigma_{\mu\nu}T) \\ {\rm 1dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R\gamma_{\mu}s) (\bar{u}\gamma^{\mu}u) \\ {\rm 2dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R\gamma_{\mu}T^As) (\bar{u}\gamma^{\mu}u) \\ {\rm 3dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R\gamma_{\mu\nu\rho}s) (\bar{u}\gamma^{\mu}u) \\ {\rm 4dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R\gamma_{\mu\nu\rho}T^As) (\bar{u}\gamma^{\mu}u) \\ {\rm 5dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_Rs) (\bar{u}u) \\ {\rm 6dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_RT^As) (\bar{u}T^As) \\ {\rm 7dsuu} & \frac{4G_F}{\sqrt{2}} (\bar{d}P_R\sigma^{\mu\nu}s) (\bar{u}\sigma_{\mu}s) \\ \end{array}$	$\begin{array}{cccc} (F^{\mu\nu}) & & & & & & & & & & & & & & & & & & &$
1dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu}s)(\bar{u}\gamma^{\mu}u)$ 2dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu}T^{A}s)(\bar{u}\gamma^{\mu}u)$ 3dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu}u)$ 4dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho}T^{A}s)(\bar{u}\gamma^{\mu}u)$ 5dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}s)(\bar{u}u)$ 6dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}T^{A}s)(\bar{u}T^{A}u)$ 7dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu}u)$	$\begin{array}{ccc} \mu & & & & & & & & & & & & \\ \Gamma & \gamma^{\mu} T^A u & & & & & & & & \\ \mu^{\mu\nu\rho} u & & & & & & & & \\ (\bar{u} \gamma^{\mu\nu\rho} T^A u) & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ & & \\ & \\ & & \\ & & \\ & \\ & & \\ & \\ $
1dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu}s)(\bar{u}\gamma^{\mu}u)$ 2dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu}T^{A}s)(\bar{u}\gamma^{\mu}u)$ 3dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu}u)$ 4dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho}T^{A}s)(\bar{u}\gamma^{\mu}u)$ 5dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}s)(\bar{u}u)$ 6dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}T^{A}s)(\bar{u}T^{A}u)$ 7dsuu $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu}u)$	$\begin{array}{ccc} \mu & & & & & & & & & & & & \\ \Gamma & \gamma^{\mu} T^A u & & & & & & & & \\ \mu^{\mu\nu\rho} u & & & & & & & & \\ (\bar{u} \gamma^{\mu\nu\rho} T^A u) & & & & & & & \\ & & & & & & & & & \\ & & & & & & & & \\ & & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ & & \\ & \\ & & \\ & & \\ & \\ & & \\ & \\ $
3dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu})$ 4dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}T^As)(\bar{u}\gamma^{\mu})$ 5dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{u}u)$ 6dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_RT^As)(\bar{u}T^As)(\bar{u}T^As)$ 7dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu})$	$(\bar{u}\gamma^{\mu\nu\rho}u)$ C C $(\bar{u}\gamma^{\mu\nu\rho}T^Au)$ C C C C
3dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu})$ 4dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}T^As)(\bar{u}\gamma^{\mu})$ 5dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{u}u)$ 6dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_RT^As)(\bar{u}T^As)$ 7dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu})$	$(\bar{u}\gamma^{\mu\nu\rho}u)$ C C $(\bar{u}\gamma^{\mu\nu\rho}T^Au)$ C C C C
5dsuu $\frac{4\overset{C}{G_F}}{\sqrt{2}}(\bar{d}P_Rs)(\bar{u}u)$ 6dsuu $\frac{4\overset{C}{G_F}}{\sqrt{2}}(\bar{d}P_RT^As)(\bar{u}T^As)$ 7dsuu $\frac{4\overset{C}{G_F}}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}s)$	$\Gamma$ $\Gamma$ $\Gamma$ $\Gamma$ $\Gamma$ $\Gamma$
7dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}s)$	$\begin{array}{c} & & & \text{C} \\ \text{U} & & & \text{C} \\ \text{U} & & & \text{C} \end{array}$
7dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}s)$	$\begin{pmatrix} 1 \\ u \end{pmatrix}$ $\begin{pmatrix} C \\ C \end{pmatrix}$
7dsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}s)$	(u,u) C
472 (=-	,
8dsuu $\frac{4\ddot{G}_{F}^{2}}{\sqrt{2}}(\bar{d}P_{R}\sigma^{\mu\nu}T^{A}s)(\bar{d}P_{R}\sigma^{\mu\nu}T^{A}s)$	$\bar{u}\sigma_{\mu\nu}T^Au)$ C
9dsuu $\frac{4\tilde{G}_F^2}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{u}^2)$	$\gamma^{\mu\nu\rho\sigma}u$ ) C
10dsuu $\frac{4\overset{Y_{F}}{G_{F}}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho\sigma}T^{A}s)$	
1pdsuu $\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{u}\gamma^\mu u)$ 2pdsuu $\frac{4\overset{\sim}{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu T^A s)(\bar{u}\gamma^\mu u)$	u) C
2pdsuu $\frac{4\overset{V_G}{V_F}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu T^As)(\bar{u}^\mu)$	$\gamma^{\mu}T^{A}u$ ) C
3pdsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{u}\gamma^{\mu\nu})$	C
4pdsuu $\frac{4\overset{\bullet}{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}T^As)$	$(\bar{u}\gamma^{\mu\nu\rho}T^Au)$ C
5pdsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L s)(\bar{u}u)$	$\mathbf{C}$
6pdsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_LT^As)(\bar{u}T^A)$	$^{1}u)$ C
7pdsuu $\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{u}\sigma_{\mu\nu}s)$	(u,u) C
8pdsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}T^As)(\bar{u}^2)$ 9pdsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{u}^2)$	$\bar{u}\sigma_{\mu\nu}T^Au)$ C
9pdsuu $\frac{4\overset{V_G}{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{u}r)$	$\gamma^{\mu\nu\rho\sigma}u$ ) C
10pdsuu $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}T^As)$	$(\bar{u}\gamma^{\mu\nu\rho\sigma}T^Au)$ C
1dscc $\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{c}\gamma^\mu c)$	) C
2dscc $\frac{4 \overset{\circ}{Q_F}}{\sqrt{2}} (\bar{d} P_R \gamma_\mu T^A s) (\bar{c}^*)$	$\gamma^{\mu}T^{A}c$ ) C
3dscc $\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{c}\gamma^{\mu})$	c
4dscc $\frac{4G_{R}^{2}}{\sqrt{2}}(ar{d}P_{R}\gamma_{\mu\nu\rho}T^{A}s)$	$(\bar{c}\gamma^{\mu\nu\rho}T^Ac)$ C
5dscc $\frac{\sqrt[4]{G_F}}{\sqrt{2}}(\bar{d}P_Rs)(\bar{c}c)$	$\mathbf{C}$
6dscc $\frac{4G_F}{\sqrt{2}}(\bar{d}P_RT^As)(\bar{c}T^A)$	(c) C

WC name	Operator	Type
7dscc	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{c}\sigma_{\mu\nu}c)$	С
8dscc	$\frac{{}^{4}\!G_{F}^{C}}{\sqrt{2}}(\bar{d}P_{R}\sigma^{\mu\nu}T^{A}s)(\bar{c}\sigma_{\mu\nu}T^{A}c)$ $\frac{{}^{4}\!G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho\sigma}s)(\bar{c}\gamma^{\mu\nu\rho\sigma}c)$ $\frac{{}^{4}\!G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho\sigma}T^{A}s)(\bar{c}\gamma^{\mu\nu\rho\sigma}T^{A}c)$	$\mathbf{C}$
9dscc	$\frac{4 \check{G}_F}{\sqrt{2}} (\bar{d} P_R \gamma_{\mu\nu\rho\sigma} s) (\bar{c} \gamma^{\mu\nu\rho\sigma} c)$	$\mathbf{C}$
10dscc	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}T^As)(\bar{c}\gamma^{\mu\nu\rho\sigma}T^Ac)$	$\mathbf{C}$
1pdscc	$\frac{4G_F}{\sqrt{2}}(dP_L\gamma_\mu s)(\bar{c}\gamma^\mu c)$	$\mathbf{C}$
2pdscc	$\frac{4\bar{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu T^As)(\bar{c}\gamma^\mu T^Ac)$	$\mathbf{C}$
3pdscc	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu T^A s)(\bar{c}\gamma^\mu T^A c)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{c}\gamma^{\mu\nu\rho}c)}$ $\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}T^A s)(\bar{c}\gamma^{\mu\nu\rho}T^A c)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}T^A s)(\bar{c}\gamma^{\mu\nu\rho}T^A c)}$	$\mathbf{C}$
4pdscc	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}T^As)(\bar{c}\gamma^{\mu\nu\rho}T^Ac)$	$\mathbf{C}$
5pdscc	$\frac{4\bar{G_F}}{\sqrt{2}}(\bar{d}P_Ls)(\bar{c}c)$	$\mathbf{C}$
6pdscc	$\frac{4\bar{G_F}}{\sqrt{2}}(\bar{d}P_LT^As)(\bar{c}T^Ac)$	$\mathbf{C}$
7pdscc	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{c}\sigma_{\mu\nu}c)$	$\mathbf{C}$
8pdscc	$\frac{\frac{4G_F^2}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}T^As)(\bar{c}\sigma_{\mu\nu}T^Ac)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{c}\gamma^{\mu\nu\rho\sigma}c)}$	$\mathbf{C}$
9pdscc	$\frac{4\bar{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{c}\gamma^{\mu\nu\rho\sigma}c)$	$\mathbf{C}$
10pdscc	$rac{4G_F}{\sqrt{2}}(ar{d}P_L\gamma_{\mu u ho\sigma}T^As)(ar{c}\gamma^{\mu u ho\sigma}T^Ac)$	$\mathbf{C}$
1dsss	$\frac{4G_F}{\sqrt{2}}(dP_R\gamma_\mu s)(\bar{s}\gamma^\mu s)$	$\mathbf{C}$
3dsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{s}\gamma^{\mu\nu\rho}s)$	$\mathbf{C}$
5dsss	$rac{4\widetilde{G_F}}{\sqrt{2}}(ar{d}P_Rs)(ar{s}s)$	$\mathbf{C}$
7dsss	$\frac{4G_F}{\sqrt{2}}(dP_R\sigma^{\mu\nu}s)(\bar{s}\sigma_{\mu\nu}s)$	$\mathbf{C}$
9dsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{s}\gamma^{\mu\nu\rho\sigma}s)$	$\mathbf{C}$
1pdsss	$rac{4G_F}{\sqrt{2}}(ar{d}P_L\gamma_\mu s)(ar{s}\gamma^\mu s)$	$\mathbf{C}$
3pdsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{s}\gamma^{\mu\nu\rho}s)$	$^{\mathrm{C}}$
5pdsss	$rac{4G_F}{\sqrt{2}}(ar{d}P_Ls)(ar{s}s)$	$\mathbf{C}$
7pdsss	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{s}\sigma_{\mu\nu}s)$	$\mathbf{C}$
9pdsss	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{s}\gamma^{\mu\nu\rho\sigma}s)$	$\mathbf{C}$
1dsdd	$\frac{4G_F}{\sqrt{2}}(d\gamma_\mu P_L s)(d\gamma^\mu d)$	$\mathbf{C}$
1pdsdd	$rac{4G_F^2}{\sqrt{2}}(ar{d}\gamma_\mu P_R s)(ar{d}\gamma^\mu d)$	$^{\mathrm{C}}$
3dsdd	$rac{\sqrt{2}}{\sqrt{2}}(ar{d}\gamma_{\mu}\Gamma_R s)(ar{d}\gamma^{\mu} b) \ rac{4G_F}{\sqrt{2}}(ar{d}\gamma_{\mu u ho}P_L s)(ar{d}\gamma^{\mu u ho}d) \ rac{4G_F}{\sqrt{2}}(ar{d}\gamma_{\mu u ho}P_R s)(ar{d}\gamma^{\mu u ho}d)$	$^{\mathrm{C}}$
3pdsdd	$\frac{4\bar{G_F}}{\sqrt{2}}(\bar{d}\gamma_{\mu\nu\rho}P_Rs)(\bar{d}\gamma^{\mu\nu\rho}d)$	$\mathbf{C}$
5dsdd		$\mathbf{C}$
5pdsdd	$\frac{4\bar{G_F}}{\sqrt{2}}(\bar{d}P_Rs)(\bar{d}d)$	$\mathbf{C}$
7dsdd	$\frac{4G_F}{\sqrt{2}}(\bar{d}\sigma^{\mu\nu}P_Ls)(\bar{d}\sigma_{\mu\nu}d)$	$\mathbf{C}$
7pdsdd	$\frac{4 \overleftarrow{G_F}}{\sqrt{2}} (ar{d}\sigma^{\mu\nu} P_R s) (ar{d}\sigma_{\mu\nu} d)$	$\mathbf{C}$
9dsdd	$\frac{4\check{G}_F^F}{\sqrt{2}}(\bar{d}\gamma_{\mu u ho\sigma}P_Ls)(\bar{d}\gamma^{\mu u ho\sigma}d)$	$\mathbf{C}$
9pdsdd	$\frac{{}^{4G_F}}{\sqrt{2}}(dP_Ls)(dd)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}P_Rs)(\bar{d}d)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}\sigma^{\mu\nu}P_Ls)(\bar{d}\sigma_{\mu\nu}d)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}\sigma^{\mu\nu}P_Rs)(\bar{d}\sigma_{\mu\nu}d)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}\gamma_{\mu\nu\rho\sigma}P_Ls)(\bar{d}\gamma^{\mu\nu\rho\sigma}d)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}\gamma_{\mu\nu\rho\sigma}P_Rs)(\bar{d}\gamma^{\mu\nu\rho\sigma}d)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu}s)(\bar{e}\gamma^{\mu}e)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu}s)(\bar{e}\gamma^{\mu}e)$ $\frac{{}^{4G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu}e)$	$\mathbf{C}$
1dsee	$\frac{4 \check{G}_F^F}{\sqrt{2}} (\bar{d} P_R \gamma_\mu s) (\bar{e} \gamma^\mu e)$	$\mathbf{C}$
1pdsee	$\frac{4 {\Hat G}_F^c}{\sqrt{2}} (ar{d} P_L \gamma_\mu s) (ar{e} \gamma^\mu e)$	$\mathbf{C}$
3dsee	$\frac{4\ddot{G}_{F}^{2}}{\bar{G}}(\bar{d}P_{B}\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}e)$	$^{\mathrm{C}}$

WC name	Operator	Type
3pdsee	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}e)$	C
5dsee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{e}e)$	$\mathbf{C}$
5pdsee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{e}e)$	$\mathbf{C}$
7dsee	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}e)$	$\mathbf{C}$
7pdsee	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}e)$	$\mathbf{C}$
9dsee	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}e)$	$\mathbf{C}$
9pdsee	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}e)$ $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}e)$	$\mathbf{C}$
1dsmumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\mu}\gamma^\mu\mu)$	$\mathbf{C}$
1pdsmumu	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\mu}\gamma^\mu\mu)$	$\mathbf{C}$
3dsmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}\mu)$	$\mathbf{C}$
3pdsmumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}\mu)$	$\mathbf{C}$
5dsmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\mu}\mu)$	$\mathbf{C}$
5pdsmumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{\mu}\mu)$	$\mathbf{C}$
7dsmumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\mu)$	$\mathbf{C}$
7pdsmumu	$rac{4 \widetilde{G}_F}{\sqrt{2}} (ar{d} P_L \sigma^{\mu  u} s) (ar{\mu} \sigma_{\mu  u} \mu)$	$\mathbf{C}$
9dsmumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}\mu)$	$\mathbf{C}$
9pdsmumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}\mu)$	$\mathbf{C}$
1dstautau	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\tau}\gamma^\mu  au)$	$\mathbf{C}$
1pdstautau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\tau}\gamma^\mu  au)$	$\mathbf{C}$
3dstautau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}\tau)$	$\mathbf{C}$
3pdstautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}\tau)$	$\mathbf{C}$
5dstautau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\tau}\tau)$	$\mathbf{C}$
5pdstautau	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{d}P_Ls)(\bar{ au} au)$	$\mathbf{C}$
7dstautau	$rac{4G_F^2}{\sqrt{2}}(ar{d}P_R\sigma^{\mu u}s)(ar{ au}\sigma_{\mu u} au)$	$\mathbf{C}$
7pdstautau	$rac{4reve{G_F}}{\sqrt{2}}(ar{d}P_L\sigma^{\mu u}s)(ar{ au}\sigma_{\mu u} au)$	$\mathbf{C}$
9dstautau	$\frac{4\breve{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}\tau)$	$\mathbf{C}$
9pdstautau	$ \frac{{}^{4}G_{F}^{G}}{\sqrt{2}}(\bar{d}P_{L}\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\tau)  \frac{{}^{4}G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}\tau)  \frac{{}^{4}G_{F}}{\sqrt{2}}(\bar{d}P_{L}\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}\tau) $	$^{\mathrm{C}}$

## sdmue

WC name	Operator	Type
1dsemu	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{e}\gamma^\mu\mu)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{e}\gamma^\mu\mu)}$ $\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}\mu)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}\mu)}$	C
1pdsemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{e}\gamma^\mu\mu)$	$^{\mathrm{C}}$
3dsemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}\mu)$	$^{\mathrm{C}}$
3pdsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}\mu)$	$^{\mathrm{C}}$
5dsemu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{e}\mu)$	$^{\mathrm{C}}$
5pdsemu	$rac{4G_F}{\sqrt{2}}(ar{d}P_Rs)(ar{e}\mu) \ rac{4G_F}{\sqrt{2}}(ar{d}P_Ls)(ar{e}\mu)$	$^{\mathrm{C}}$

WC name	Operator	Type
7dsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\mu)$	$\overline{C}$
7pdsemu	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\mu)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\mu)}$	$^{\mathrm{C}}$
9dsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\mu)$	$^{\mathrm{C}}$
9pdsemu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\mu)$	$^{\mathrm{C}}$

#### sdtaue

WC name	Operator	Type
1dsetau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{e}\gamma^\mu\tau)$	C
1pdsetau	$\frac{4 \check{G_F}}{\sqrt{2}} (\bar{d} P_L \gamma_\mu s) (\bar{e} \gamma^\mu  au)$	$^{\mathrm{C}}$
3dsetau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}\tau)$	$\mathbf{C}$
3pdsetau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{e}\gamma^{\mu\nu\rho}\tau)$	$\mathbf{C}$
5dsetau	$\frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{d} P_R s) (\bar{e}  au)$	$\mathbf{C}$
5pdsetau	$\frac{4 \tilde{G}_F}{\sqrt{2}} (\bar{d} P_L s) (\bar{e}  au)$	$\mathbf{C}$
7dsetau	$\frac{4\check{G_F}}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu}\tau)$	$^{\mathrm{C}}$
7pdsetau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{e}\sigma_{\mu\nu} au)$	$\mathbf{C}$
9dsetau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\tau)$	$\mathbf{C}$
9pdsetau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\tau)$ $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{e}\gamma^{\mu\nu\rho\sigma}\tau)$	$^{\mathrm{C}}$

#### sdemu

WC name	Operator	Type
1dsmue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\mu}\gamma^\mu e)$	$\overline{\mathbf{C}}$
1pdsmue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\mu}\gamma^\mu e)$	$\mathbf{C}$
3dsmue	$\frac{4\ddot{G}_F^c}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}e)$ $\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}e)$	$\mathbf{C}$
3pdsmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}e)$	$\mathbf{C}$
5dsmue	$\frac{4G_F}{\sqrt{a}}(\bar{d}P_R s)(\bar{\mu}e)$	$\mathbf{C}$
5pdsmue	$rac{4G_F}{\sqrt{2}}(ar{d}P_L s)(ar{\mu}e)$	$\mathbf{C}$
7dsmue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}e)$	$\mathbf{C}$
7pdsmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}e)$	$\mathbf{C}$
9dsmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}e)$	$\mathbf{C}$
9pdsmue	$\frac{\frac{4\ddot{G}_{F}}{\sqrt{2}}(\bar{d}P_{L}\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}e)}{\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{R}\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}e)}$ $\frac{4G_{F}}{\sqrt{2}}(\bar{d}P_{L}\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}e)$	$^{\mathrm{C}}$

#### ${\tt sdtaumu}$

WC name	Operator	Type
1dsmutau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\mu}\gamma^\mu\tau)$	С
1pdsmutau	$rac{4reve{Q}_F^2}{\sqrt{2}}(ar{d}P_L\gamma_\mu s)(ar{\mu}\gamma^\mu au)$	$^{\mathrm{C}}$
3dsmutau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}\tau)$	$^{\mathrm{C}}$
3pdsmutau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\mu}\gamma^{\mu\nu\rho}\tau)$	$^{\mathrm{C}}$
5dsmutau	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\mu}\tau)$	$^{\mathrm{C}}$
5pdsmutau	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{\mu}\tau)$	$^{\mathrm{C}}$
7dsmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\tau)$	$^{\mathrm{C}}$
7pdsmutau	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{\mu}\sigma_{\mu\nu}\tau)$	$^{\mathrm{C}}$
9dsmutau	$\frac{4\dot{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}\tau)$	$^{\mathrm{C}}$
9pdsmutau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{\mu}\gamma^{\mu\nu\rho\sigma}\tau)$	$^{\mathrm{C}}$

## ${\tt sdetau}$

WC name	Operator	Type
1dstaue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\tau}\gamma^\mu e)$	C
1pdstaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\tau}\gamma^\mu e)$	$\mathbf{C}$
3dstaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}e)$	$\mathbf{C}$
3pdstaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}e)$	$\mathbf{C}$
5dstaue	$\frac{4\overleftarrow{Q_F}}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\tau}e)$	$\mathbf{C}$
5pdstaue	$rac{4reve{G_F}}{\sqrt{2}}(ar{d}P_Ls)(ar{ au}e)$	$\mathbf{C}$
7dstaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}e)$	$\mathbf{C}$
7pdstaue	$\frac{4\ddot{G}_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}e)$	$\mathbf{C}$
9dstaue	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}e)$	$\mathbf{C}$
9pdstaue	$\frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}e)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}e)}$	$\mathbf{C}$

## ${\tt sdmutau}$

WC name	Operator	Type
1dstaumu	$ \frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\tau}\gamma^\mu\mu)  \frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\tau}\gamma^\mu\mu)  \frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}\mu)  \frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}\mu) $	C
1pdstaumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\tau}\gamma^\mu\mu)$	$\mathbf{C}$
3dstaumu	$\frac{4\widetilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}\mu)$	$\mathbf{C}$
3pdstaumu	$\frac{4\ddot{G_F}}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho}s)(\bar{\tau}\gamma^{\mu\nu\rho}\mu)$	$\mathbf{C}$
5dstaumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\tau}\mu)$	$\mathbf{C}$
5pdstaumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L s)(\bar{\tau}\mu)$	$\mathbf{C}$
7dstaumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\mu)$	$\mathbf{C}$
7pdstaumu	$ \frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_Rs)(\bar{\tau}\mu)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_Ls)(\bar{\tau}\mu)} $ $ \frac{\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\mu)}{\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\sigma^{\mu\nu}s)(\bar{\tau}\sigma_{\mu\nu}\mu)} $	$\mathbf{C}$

WC name	Operator	Type
9dstaumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}\mu)$	C
9pdstaumu	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}\mu)$ $\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_{\mu\nu\rho\sigma}s)(\bar{\tau}\gamma^{\mu\nu\rho\sigma}\mu)$	С

#### sdnunu

WC name	Operator	Type
nu1dsee	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_e\gamma^\mu\nu_e)$	C
nu1pdsee	$rac{4 \overleftarrow{G_F}}{\sqrt{2}} (ar{d} P_L \gamma_\mu s) (ar{ u}_e \gamma^\mu  u_e)$	$\mathbf{C}$
nu1dsmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{ u}_\mu\gamma^\mu u_\mu)$	$\mathbf{C}$
nu1pdsmumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{ u}_\mu\gamma^\mu u_\mu)$	$\mathbf{C}$
nu1dstautau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{ u}_ au\gamma^\mu u_ au)$	$\mathbf{C}$
nu1pdstautau	$rac{4 \overleftarrow{G_F}}{\sqrt{2}} (ar{d} P_L \gamma_\mu s) (ar{ u}_ au \gamma^\mu  u_ au)$	$\mathbf{C}$
nu1dsemu	$rac{4 \stackrel{\sim}{G_F}}{\sqrt{2}} (ar{d} P_R \gamma_\mu s) (ar{ u}_e \gamma^\mu  u_\mu)$	$\mathbf{C}$
nu1pdsemu	$rac{4reve{G_F}}{\sqrt{2}}(ar{d}P_L\gamma_\mu s)(ar{ u}_e\gamma^\mu u_\mu)$	$\mathbf{C}$
nu1dsmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_\mu\gamma^\mu\nu_e)$	$\mathbf{C}$
nu1pdsmue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\nu}_\mu\gamma^\mu\nu_e)$	$\mathbf{C}$
nu1dsetau	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_e\gamma^\mu\nu_ au)$	$\mathbf{C}$
nu1pdsetau	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\nu}_e\gamma^\mu\nu_ au)$	$\mathbf{C}$
nu1dstaue	$\frac{4G_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{\nu}_\tau\gamma^\mu\nu_e)$	$\mathbf{C}$
nu1pdstaue	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_L\gamma_\mu s)(\bar{\nu}_\tau\gamma^\mu\nu_e)$	$\mathbf{C}$
nu1dstaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{d}P_R\gamma_\mu s)(\bar{ u}_ au\gamma^\mu u_\mu)$	$\mathbf{C}$
nu1pdstaumu	$\frac{4\tilde{G}_F}{\sqrt{2}}(ar{d}P_L\gamma_\mu s)(ar{ u}_ au\gamma^\mu u_\mu)$	$\mathbf{C}$
nu1dsmutau	$\frac{4\tilde{G}_F}{\sqrt{2}}(ar{d}P_R\gamma_\mu s)(ar{ u}_\mu\gamma^\mu u_ au)$	$\mathbf{C}$
nu1pdsmutau	$rac{4reve{G}_F}{\sqrt{2}}(ar{d}P_L\gamma_\mu s)(ar{ u}_\mu\gamma^\mu u_ au)$	$^{\mathrm{C}}$

## cucu

WC name	Operator	Type
1cucu	$\frac{4G_F}{\sqrt{2}}(\bar{c}\gamma_\mu P_L u)(\bar{c}\gamma^\mu P_L u)$	C
5cucu	$\frac{4\check{G}_F}{\sqrt{2}}(\bar{c}_{\alpha}P_Lu_{\beta})(\bar{c}_{\beta}P_Ru_{\alpha})$	$\mathbf{C}$
2cucu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Lu)(\bar{c}P_Lu)$	$\mathbf{C}$
1pcucu	$ \frac{4G_F}{\sqrt{2}}(\bar{c}P_L u)(\bar{c}P_L u)  \frac{4G_F}{\sqrt{2}}(\bar{c}\gamma_\mu P_R u)(\bar{c}\gamma^\mu P_R u)  \frac{4G_F}{\sqrt{2}}(\bar{c}_\alpha P_L u_\beta)(\bar{c}_\beta P_L u_\alpha)  \frac{4G_F}{\sqrt{2}}(\bar{c}P_R u)(\bar{c}P_R u) $	$\mathbf{C}$
3cucu	$\frac{4\widetilde{G_F}}{\sqrt{2}}(\bar{c}_{lpha}P_Lu_{eta})(\bar{c}_{eta}P_Lu_{lpha})$	$^{\mathrm{C}}$
2pcucu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Ru)(\bar{c}P_Ru)$	$^{\mathrm{C}}$
4cucu	$\frac{4\tilde{G}_F}{\sqrt{2}}(\bar{c}P_Lu)(\bar{c}P_Ru)$	$^{\mathrm{C}}$
Зрсиси	$\frac{4G_F}{\sqrt{2}}(\bar{c}P_L u)(\bar{c}P_R u)$ $\frac{4G_F}{\sqrt{2}}(\bar{c}_{\alpha}P_R u_{\beta})(\bar{c}_{\beta}P_R u_{\alpha})$	$^{\mathrm{C}}$